



STIC Search Report

EIC 1700

STIC Database Tracking Number: 226030

TO: Gregory Listvoyb
Location: REM 10A28
Art Unit : 1711
June 4, 2007

Case Serial Number: 10/522523

From: Usha Shrestha
Location: EIC 1700
REMSEN 4B28
Phone: 571/272-3519
Usha.shrestha@uspto.gov

Search Notes

Examiner Gregory Listvoyb ,

See attached results.

If you have any questions about this search feel free to contact me at any time.

Thank you for using STIC search services!

Usha Shrestha
Technical Information Specialist
EIC 1700
(571)272-3519

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Gregory Litsky Examiner #: _____ Date: 5/24/07
Art Unit: 1711 Phone Number 30 26105 Serial Number: 10/522 523
Mail Box and Bldg/Room Location: R 10A28 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

SCIENTIFIC REFERENCE BR
Sci & Tech Inf. Ctr.

Earliest Priority Filing Date: _____

MAY 25 RECD

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Cl 1-47 Pref: Structure of dcamine.

STAFF USE ONLY

Type of Search

Vendors and cost where applicable



STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher or contact:*

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

➤ I am an examiner in Workgroup: Example: 1713

➤ Relevant prior art found, search results used as follows:

- 102 rejection
- 103 rejection
- Cited as being of interest.
- Helped examiner better understand the invention.
- Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- Foreign Patent(s)
- Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.).

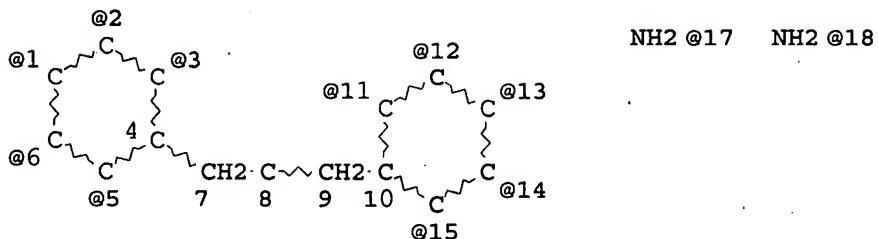
➤ Relevant prior art not found:

- Results verified the lack of relevant prior art (helped determine patentability).
- Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28

=> d que 126
L15 STR



VPA 17-11/12/13/14/15 U

VPA 18-3/2/1/5/6 U

NODE ATTRIBUTES:

NSPEC IS RC AT 8
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE

L17	77 SEA FILE=REGISTRY SSS FUL L15			
L19	53 SEA FILE=HCAPLUS ABB=ON PLU=ON	L17		
L21	16 SEA FILE=HCAPLUS ABB=ON PLU=ON	L19 AND (POLYMER? OR		
	PLASTIC?)/SC,SX			
L22	3 SEA FILE=HCAPLUS ABB=ON PLU=ON	L19 AND PHOTO?		
L23	39 SEA FILE=HCAPLUS ABB=ON PLU=ON	L19 AND PREP/RL		
L24	16 SEA FILE=HCAPLUS ABB=ON PLU=ON	L19 AND RACT/RL		
L25	40 SEA FILE=HCAPLUS ABB=ON PLU=ON	(L21 OR L22 OR L23 OR		
	L24)			
L26	37 SEA FILE=HCAPLUS ABB=ON PLU=ON	L25 AND (1840-2003)/PRY,AY		
	,PY			

=> sel 126 hit rn 1-
E48 THROUGH E106 ASSIGNED

=> d 126 1-37 ibib ed abs hitstr hitind

L26 ANSWER 1 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:522723 HCAPLUS
DOCUMENT NUMBER: 143:50785
TITLE: Liquid crystal-alignment agent in liquid crystal displays
INVENTOR(S): Tamura, Norihisa
PATENT ASSIGNEE(S): Chisso Corp., Japan; Chisso Petrochemical Corporation
SOURCE: Jpn. Kokai Tokkyo Koho, 45 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2005157346 A 20050616 JP 2004-322855 20041105

KR 2005043708 A 20050511 KR 2004-89857 20041105

PRIORITY APPLN. INFO.: JP 2003-375855 A 20031105

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ED Entered STN: 17 Jun 2005

AB The title alignment agent is polyamic acid or its polyimide derivative and contains 10-100 mol% of -NH-C(=O)-R1(COOH)2C(=O)-NH-A1-X-Q-X-A2- repeating unit and 0-90 mol % of -NH-C(=O)-R1(COOH)2C(=O)-NH-R2- repeating unit (R1 = 4-valent organic group; R2 = 2-valent organic group; A1-2 = 2-valent aromatic or condensed ring; X = single bond, O, S; Q = -(CH₂)_p, -((CH₂)O)_q(CH₂)_{2-p}; p = integer 3-10; q = integer 1-3). The agent shows high voltage hold ratio(VHR) and low residual charge and provides stable pretilt angles of liquid crystals.

IT 853575-61-8P 853575-64-1P 853575-65-2P

853575-66-3P

(liquid crystal-alignment agent in liquid crystal displays)

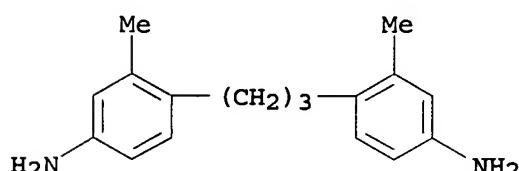
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CM 1

CRN 853575-60-7

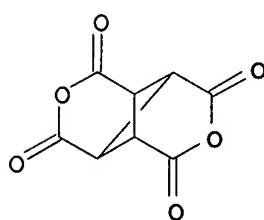
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CM 2

CRN 15377-91-0

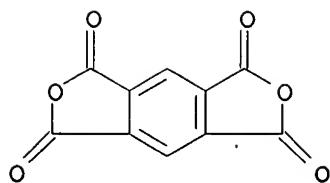
CMF C8 H4 O6



CM 3

CRN 89-32-7

CMF C10 H2 O6



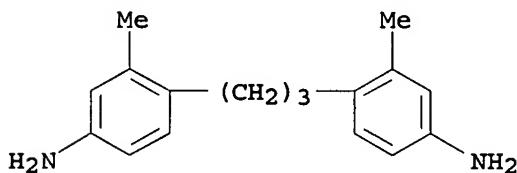
RN 853575-64-1 HCAPLUS

CN Cyclobuta[1,2-c:3,4-c']difurantetron, tetrahydro-, polymer with
4,4'-(1,3-propanediyl)bis[3-methylbenzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 853575-60-7

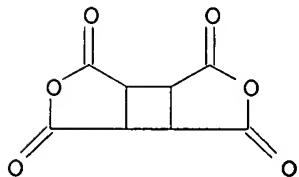
CMF C17 H22 N2



CM 2

CRN 4415-87-6

CMF C8 H4 O6



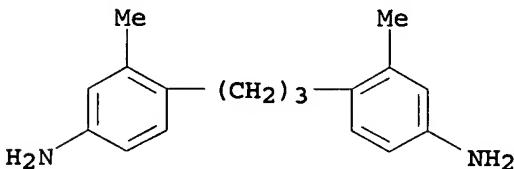
RN 853575-65-2 HCAPLUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with
1,4-benzenediamine, 4,4'-(1,3-propanediyl)bis[3-methylbenzenamine] and
tetrahydrocyclobuta[1,2-c:3,4-c']difurantetron (9CI) (CA INDEX NAME)

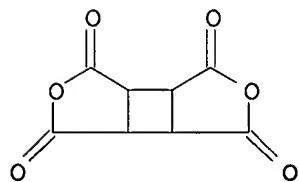
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CRN 853575-60-7

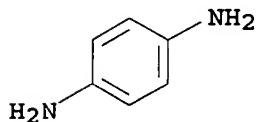
CMF C17 H22 N2



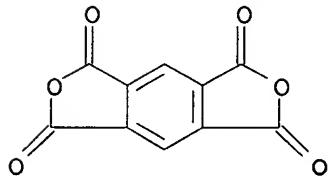
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CRN 4415-87-6
CMF C8 H4 O6

CM 3

CRN 106-50-3
CMF C6 H8 N2

CM 4

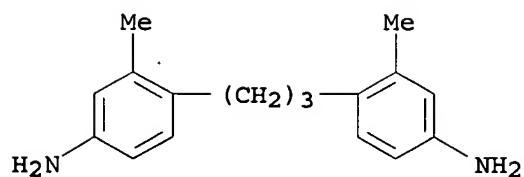
CRN 89-32-7
CMF C10 H2 O6

RN 853575-66-3 HCPLUS

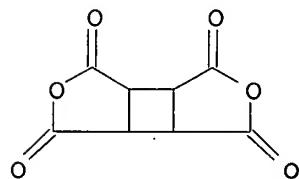
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, hexahydro-, polymer with 1H,3H-benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, 4,4'-methylenebis[benzenamine], 4,4'-(1,3-propanediyl)bis[3-methylbenzenamine] and tetrahydrocyclobuta[1,2-c:3,4-c']difurantetron (9CI) (CA INDEX NAME)

CM 1

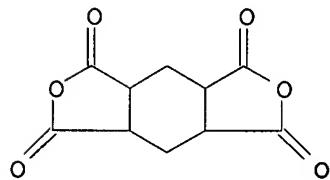
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CMF C17 H22 N2



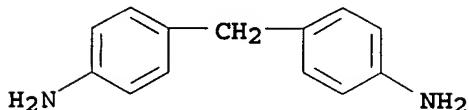
CM 2

CRN 4415-87-6
CMF C8 H4 O6

CM 3

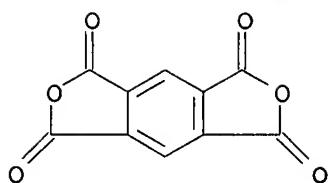
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CMF C10 H8 O6

CM 4

CRN 101-77-9
CMF C13 H14 N2

CM 5

CRN 89-32-7
CMF C10 H2 O6



IC ICM G02F001-1337
ICS C08G073-10

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 37

IT 853575-61-8P 853575-62-9P 853575-63-0P
853575-64-1P 853575-65-2P 853575-66-3P
853575-67-4P 853575-68-5P 853575-70-9P 853575-73-2P
853575-75-4P 853575-77-6P 853575-78-7P 853575-79-8P
853575-80-1P 853575-81-2P 853575-83-4P 853575-84-5P
853575-85-6P 853575-87-8P 853575-88-9P

(liquid crystal-alignment agent in liquid crystal displays)

L26 ANSWER 2 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:522127 HCAPLUS

DOCUMENT NUMBER: 143:68443

TITLE: Diamines, polyamic acids and polyimides prepared therefrom, liquid crystal alignment agents and films, and liquid crystal displays

INVENTOR(S): Tamura, Norihisa

PATENT ASSIGNEE(S): Chisso Corp., Japan; Chisso Petrochemical Corporation

SOURCE: Jpn. Kokai Tokkyo Koho, 46 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

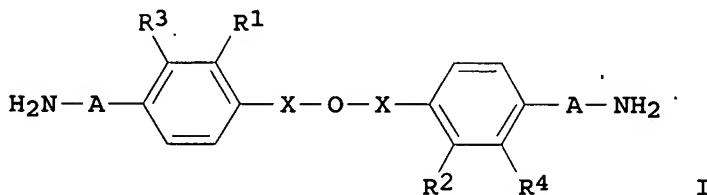
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005154436	A	20050616	JP 2004-322856 <--	20041105
KR 2005043707	A	20050511	KR 2004-89856 <--	20041105
PRIORITY APPLN. INFO.:			JP 2003-375856 <--	A 20031105

OTHER SOURCE(S): MARPAT 143:68443

ED Entered STN: 17 Jun 2005

GI



AB The diamines are represented by I [Q = $(CH_2)_n$, $[(CH_2)_2O]_m(CH_2)_2$; n = 3-10; m = 1-3; A = single bond, (F-, C1-4 alkyl-, C1-4 alkoxy-substituted) 1,4-phenylene; R1, R2 = H, F, C1-4 alkyl, C1-4 alkoxy; R3, R4 = H, F; X = single bond, O, S; ≥ 1 of R1, R2 = F, C1-4 alkyl, C1-4 alkoxy when Q = $(CH_2)_n$, A = single bond, X = single bond, S; ≥ 1 of R1-R4 = F when A = single bond, X = O]. The liquid crystal displays have stable pretilt angles and high voltage holding ratio (VHR).

IT 853796-69-7P 853796-71-1P
(diamines for manufacture of polyamic acids and polyimides useful as liquid crystal alignment agents for liquid crystal displays)

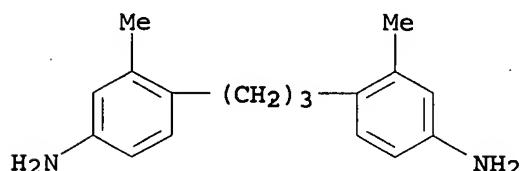
RN 853796-69-7 HCPLUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 4,4'-(1,3-propanediyl)bis[3-methylbenzenamine] and tetrahydrocyclobuta[1,2-c:3,4-c']difurantetrone (9CI) (CA INDEX NAME)

CM 1

CRN 853575-60-7

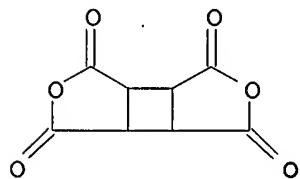
CMF C17 H22 N2



CM 2

CRN 4415-87-6

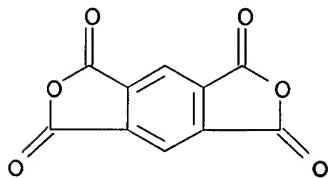
CMF C8 H4 O6



CM 3

CRN 89-32-7

CMF C10 H2 O6



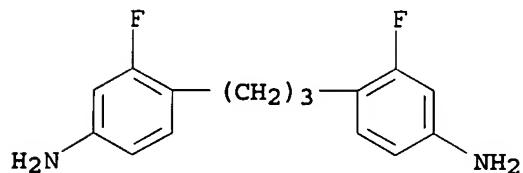
RN 853796-71-1 HCAPLUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with
4,4'-(1,3-propanediyl)bis[3-fluorobenzenamine] and
tetrahydrocyclobuta[1,2-c:3,4-c']difurantetrone (9CI). (CA INDEX NAME)

CM 1

CRN 853796-44-8

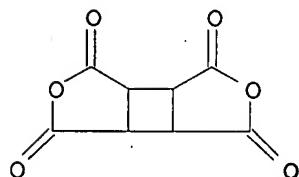
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CM 2

CRN 4415-87-6

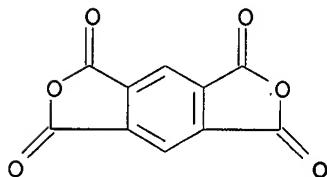
CMF C8 H4 O6



CM 3

CRN 89-32-7

CMF C10 H2 O6

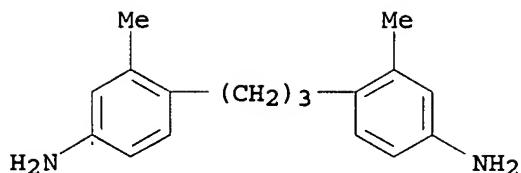


IT 853575-60-7P 853796-44-8P

(diamines for manufacture of polyamic acids and polyimides useful as
liquid crystal alignment agents for liquid crystal displays)

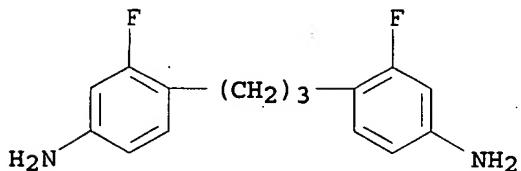
RN 853575-60-7 HCAPLUS

CN Benzenamine, 4,4'-(1,3-propanediyl)bis[3-methyl- (9CI) (CA INDEX
NAME)



RN 853796-44-8 HCAPLUS

CN Benzenamine, 4,4'-(1,3-propanediyl)bis[3-fluoro- (9CI) (CA INDEX NAME)]



IC ICM C07C211-54

ICS C07C211-56; C07C217-76; C07C323-29; C08G073-10; G02F001-1337

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 25, 38

IT 853796-69-7P 853796-71-1P 853796-73-3P

853796-75-5P 853796-76-6P 853796-78-8P 853796-80-2P

853796-82-4P 853796-83-5P 853796-85-7P 853796-87-9P

853796-89-1P 853796-91-5P 853796-92-6P 853796-94-8P

853926-90-6P

(diamines for manufacture of polyamic acids and polyimides useful as liquid crystal alignment agents for liquid crystal displays)

IT 4642-38-0P 853575-60-7P 853796-39-1P 853796-41-5P

853796-43-7P 853796-44-8P 853796-47-1P 853796-49-3P

853796-52-8P 853796-54-0P 853796-56-2P 853796-58-4P

853796-64-2P 853796-66-4P 853796-68-6P

(diamines for manufacture of polyamic acids and polyimides useful as liquid crystal alignment agents for liquid crystal displays)

L26 ANSWER 3 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:97228 HCAPLUS

DOCUMENT NUMBER: 140:164372

TITLE: Photoactive materials, polymers, and alignment layers for (electro)optical devices

INVENTOR(S): Marck, Guy; Muller, Olivier

PATENT ASSIGNEE(S): Rolic AG, Switz.

SOURCE: Eur. Pat. Appl., 42 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1386910	A1	20040204	EP 2002-405659	20020730

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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,

PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK WO 2004013086	A1	20040212	WO 2003-CH507	20030725
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IN 2004MN00763	A	20051118	IN 2004-MN763	20041228
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US 2005288480	A1	20051229	US 2005-522523	20050126
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PRIORITY APPLN. INFO.:			EP 2002-405659	A 20020730
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			WO 2003-CH507	W 20030725
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OTHER SOURCE(S): MARPAT 140:164372

ED Entered STN: 06 Feb 2004

AB Diamine compds. H₂NC₆H₄CH₂C(A₁A₂)CH₂C₆H₄NH₂ are useful as precursors for the production of liquid crystal alignment layers, where A₁ = (mesogen) organic group of 1-40 C atoms, A₂ = H or an organic group of 1-40 C atoms. The diamines containing mesogenic groups are polymerized with aromatic anhydrides

to yield polyamic acids and polyimides for alignment layers.

IT 653307-88-1P 653307-93-8P 653307-98-3P

653308-06-6P 653308-15-7P 653308-24-8P

653308-36-2P 653308-42-0P 653308-50-0P

653308-62-4P 653571-26-7P

(photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)

RN 653307-88-1 HCPLUS

CN Propanedioic acid, bis[(4-aminophenyl)methyl]-, bis[6-[[4-[(1E)-3-methoxy-3-oxo-1-propenyl]benzoyl]oxy]hexyl] ester, polymer with tetrahydrocyclobuta[1,2-c:3,4-c']difurantetronone (9CI) (CA INDEX NAME)

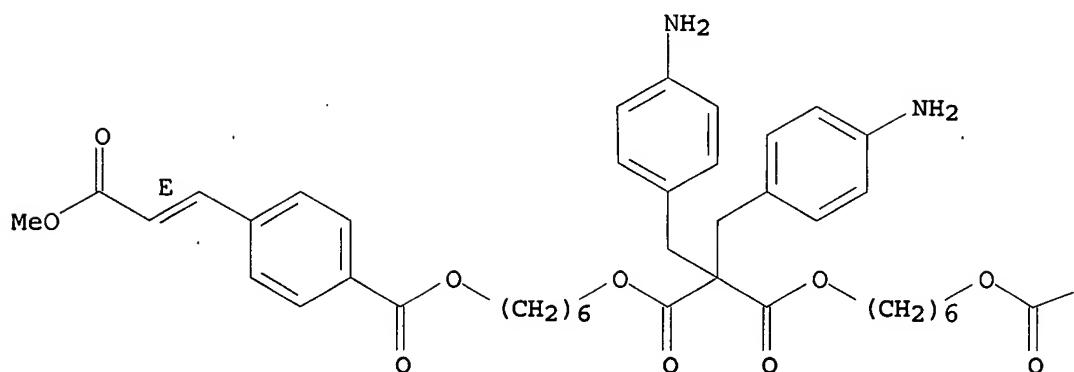
CM 1

CRN 653306-91-3

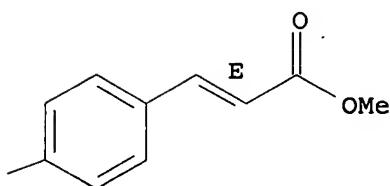
CMF C51 H58 N2 O12

Double bond geometry as shown.

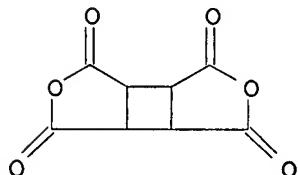
PAGE 1-A



PAGE 1-B



CM 2

CRN 4415-87-6
CMF C8 H4 O6

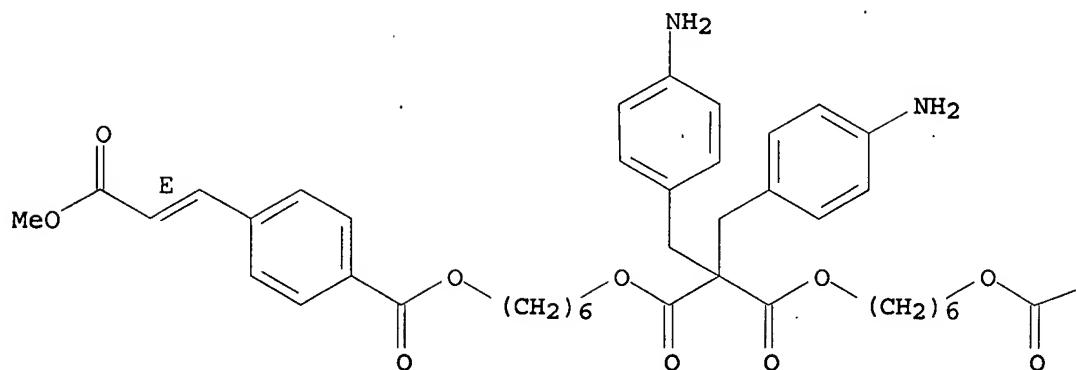
RN 653307-93-8 HCPLUS
 CN Propanedioic acid, bis[(4-aminophenyl)methyl]-, bis[6-[[4-[(1E)-3-methoxy-3-oxo-1-propenyl]benzoyl]oxy]hexyl] ester, polymer with 3a,4,5,9b-tetrahydro-5-(tetrahydro-2,5-dioxo-3-furanyl)naphtho[1,2-c]furan-1,3-dione (9CI) (CA INDEX NAME)

CM 1

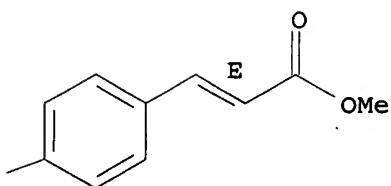
CRN 653306-91-3
CMF C51 H58 N2 O12

Double bond geometry as shown.

PAGE 1-A

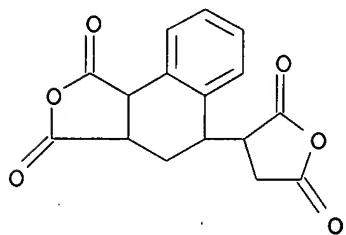


PAGE 1-B



CM 2

CRN 13912-65-7
 CMF C16 H12 O6



RN 653307-98-3 HCPLUS
 CN Propanedioic acid, bis[(4-aminophenyl)methyl]-, bis[6-[[4-[(1E)-3-methoxy-3-oxo-1-propenyl]benzoyl]oxy]hexyl] ester, polymer with 3a,4,5,7a-tetrahydro-7-methyl-5-(tetrahydro-2,5-dioxo-3-furanyl)-1,3-isobenzofuranidine (9CI) (CA INDEX NAME)

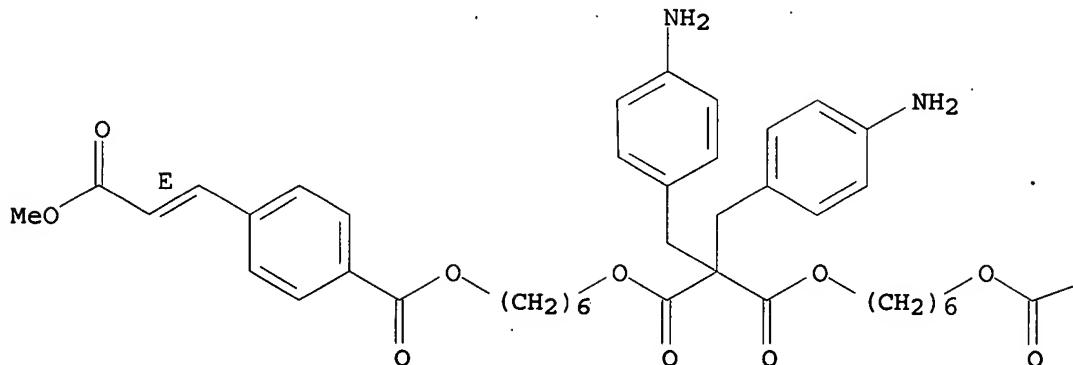
CM 1

CRN 653306-91-3

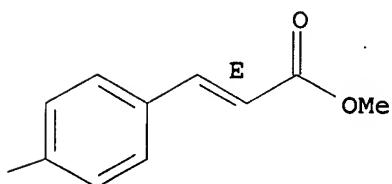
CMF C51 H58 N2 O12

Double bond geometry as shown.

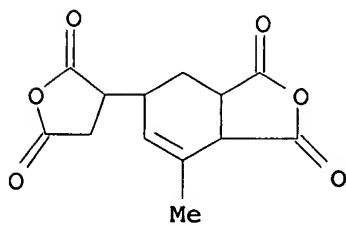
PAGE 1-A



PAGE 1-B



CM 2

CRN 73003-90-4
CMF C13 H12 O6

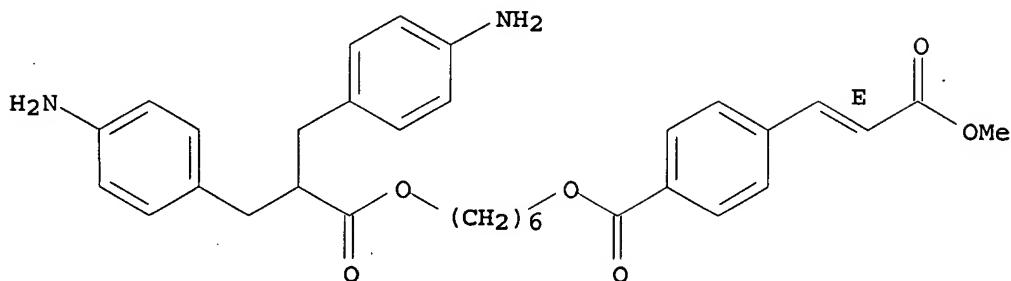
RN 653308-06-6 HCPLUS

CN Benzenepropanoic acid, 4-amino- α -[(4-aminophenyl)methyl]-, 6-[[4-[(1E)-3-methoxy-3-oxo-1-propenyl]benzoyl]oxy]hexyl ester, polymer with tetrahydrocyclobuta[1,2-c:3,4-c']difuranetrone (9CI) (CA INDEX NAME)

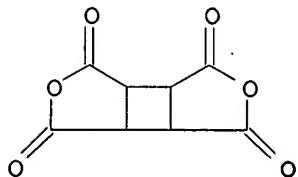
CM 1

CRN 653307-25-6
CMF C33 H38 N2 O6

Double bond geometry as shown.



CM 2

CRN 4415-87-6
CMF C8 H4 O6

RN 653308-15-7 HCPLUS

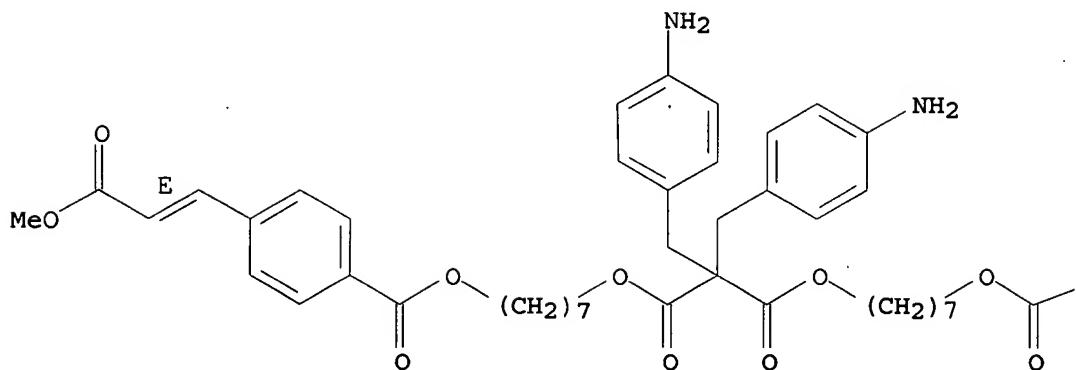
CN Propanedioic acid, bis[(4-aminophenyl)methyl]-, bis[7-[[4-[(1E)-3-methoxy-3-oxo-1-propenyl]benzoyl]oxy]heptyl] ester, polymer with tetrahydrocyclobuta[1,2-c:3,4-c']difurantetronone (9CI) (CA INDEX NAME)

CM 1

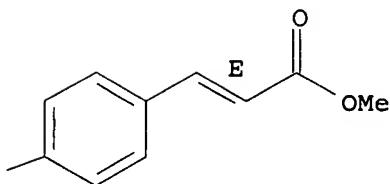
CRN 653308-14-6
CMF C53 H62 N2 O12

Double bond geometry as shown.

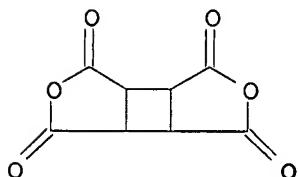
PAGE 1-A



PAGE 1-B



CM 2

CRN 4415-87-6
CMF C8 H4 O6

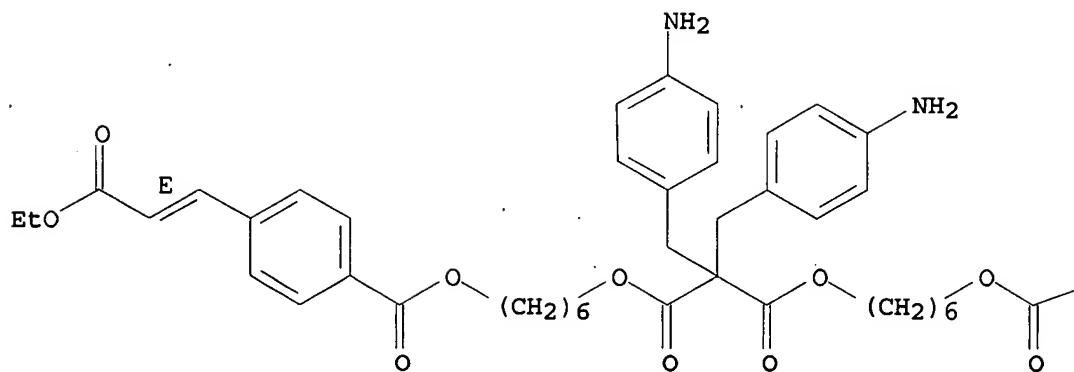
RN 653308-24-8 HCPLUS
 CN Propanedioic acid, bis[(4-aminophenyl)methyl]-, bis[6-[[4-[(1E)-3-ethoxy-3-oxo-1-propenyl]benzoyl]oxy]hexyl] ester, polymer with tetrahydrocyclobuta[1,2-c:3,4-c']difurantetron (9CI) (CA INDEX NAME)

CM 1

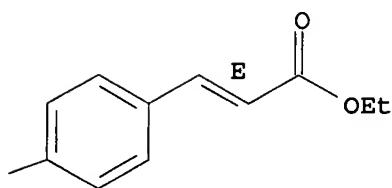
CRN 653308-23-7
CMF C53 H62 N2 O12

Double bond geometry as shown.

PAGE 1-A

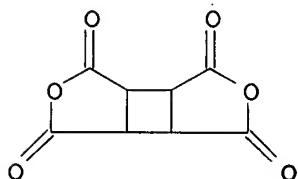


PAGE 1-B



CM 2

CRN 4415-87-6
 CMF C8 H4 O6

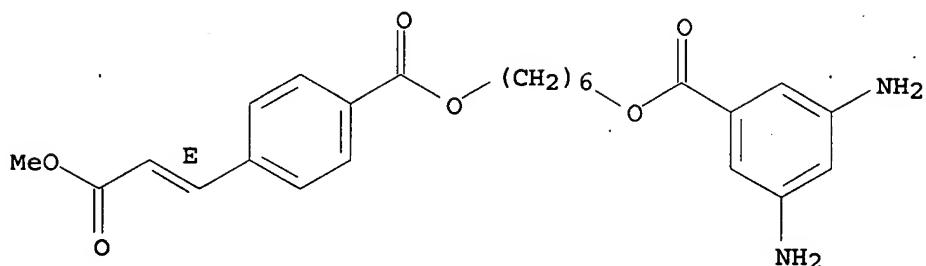


RN 653308-36-2 HCPLUS
 CN Cholest-5-en-3-ol (3 β)-, 4-amino- α -[(4-aminophenyl)methyl]benzenepropanoate, polymer with 6-[[4-[(1E)-3-methoxy-3-oxo-1-propenyl]benzoyl]oxy]hexyl 3,5-diaminobenzoate and tetrahydrocyclobuta[1,2-c:3,4-c']difurantetron (9CI) (CA INDEX NAME)

CM 1

CRN 653308-35-1
 CMF C24 H28 N2 O6

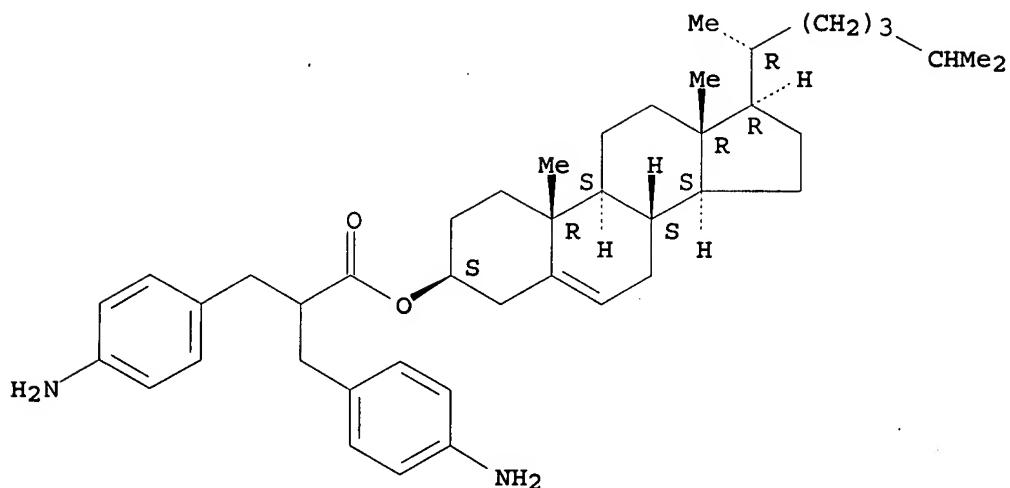
Double bond geometry as shown.



CM 2

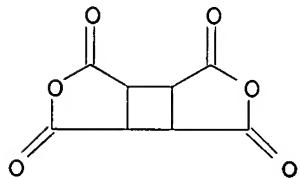
CRN 653307-36-9
CMF C43 H62 N2 O2

Absolute stereochemistry.



CM 3

CRN 4415-87-6
CMF C8 H4 O6



RN 653308-42-0 HCPLUS
CN Hexanoic acid, 6-[4-[(1E)-3-methoxy-3-oxo-1-propenyl]phenoxy]-, 2,2-bis[(4-aminophenyl)methyl]-1,3-propanediyl ester, polymer with

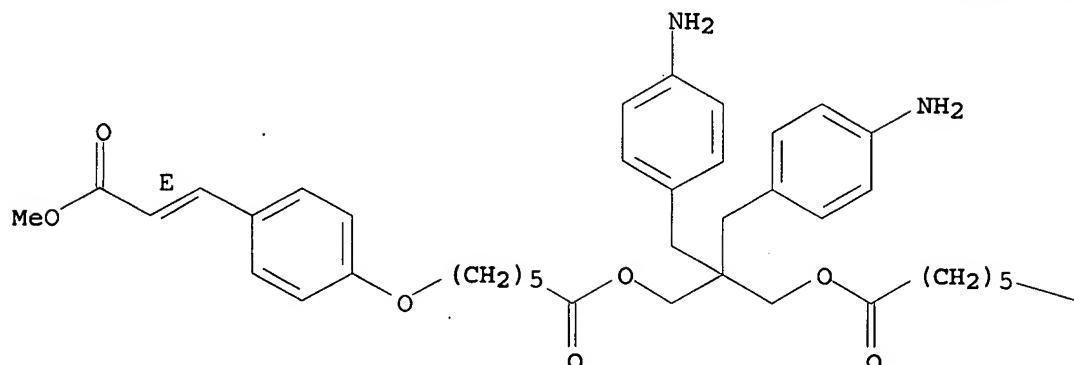
tetrahydrocyclobuta[1,2-c:3,4-c']difurantrone (9CI) (CA INDEX NAME)

CM 1

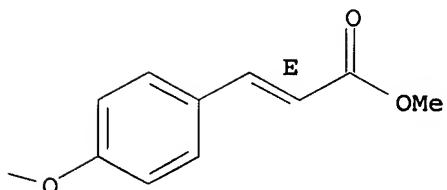
CRN 653307-62-1
CMF C49 H58 N2 O10

Double bond geometry as shown.

PAGE 1-A

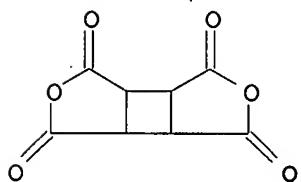


PAGE 1-B



CM 2

CRN 4415-87-6
CMF C8 H4 O6



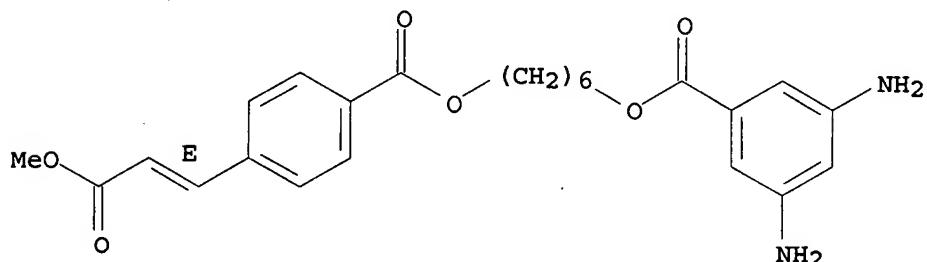
RN 653308-50-0 HCAPLUS
CN Propanedioic acid, bis[(4-aminophenyl)methyl]-, bis[6-[[4-[(1E)-3-

methoxy-3-oxo-1-propenyl]benzoyl]oxy]hexyl] ester, polymer with
 6-[[4-[(1E)-3-methoxy-3-oxo-1-propenyl]benzoyl]oxy]hexyl
 3,5-diaminobenzoate and tetrahydrocyclobuta[1,2-c:3,4-
 c']difurantetrone (9CI) (CA INDEX NAME)

CM 1

CRN 653308-35-1
 CMF C24 H28 N2 O6

Double bond geometry as shown.

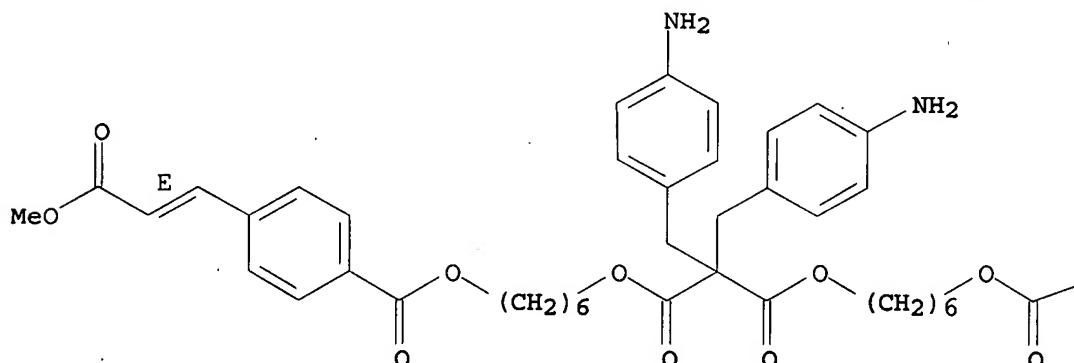


CM 2

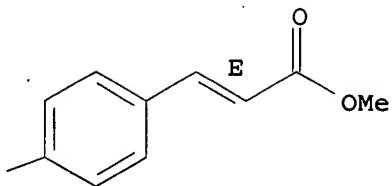
CRN 653306-91-3
 CMF C51 H58 N2 O12

Double bond geometry as shown.

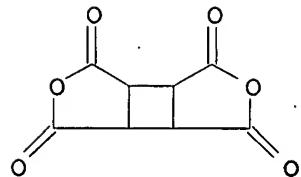
PAGE 1-A



PAGE 1-B

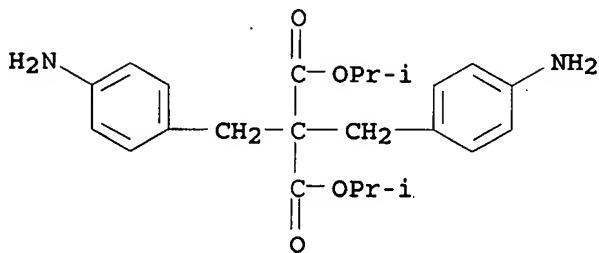


CM 3

CRN 4415-87-6
CMF C8 H4 O6

RN 653308-62-4 HCPLUS
 CN Propanedioic acid, bis[(4-aminophenyl)methyl]-, bis(1-methylethyl) ester, polymer with 6-[[4-[(1E)-3-methoxy-3-oxo-1-propenyl]benzoyl]oxy]hexyl 3,5-diaminobenzoate and tetrahydrocyclobuta[1,2-c:3,4-c']difurantetron (9CI) (CA INDEX NAME)

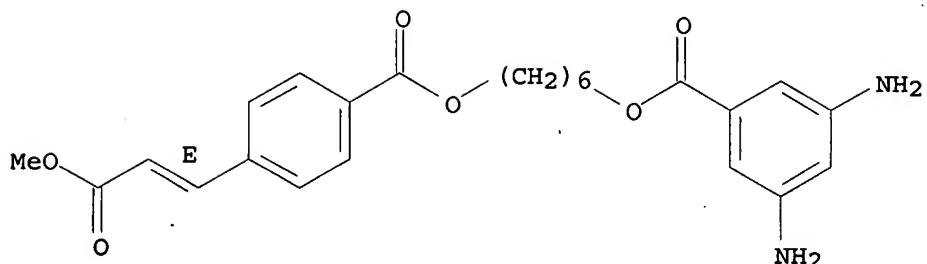
CM 1

CRN 653308-61-3
CMF C23 H30 N2 O4

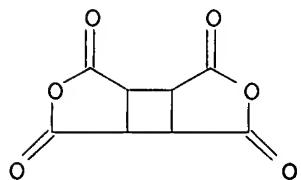
CM 2

CRN 653308-35-1
CMF C24 H28 N2 O6

Double bond geometry as shown.



CM 3

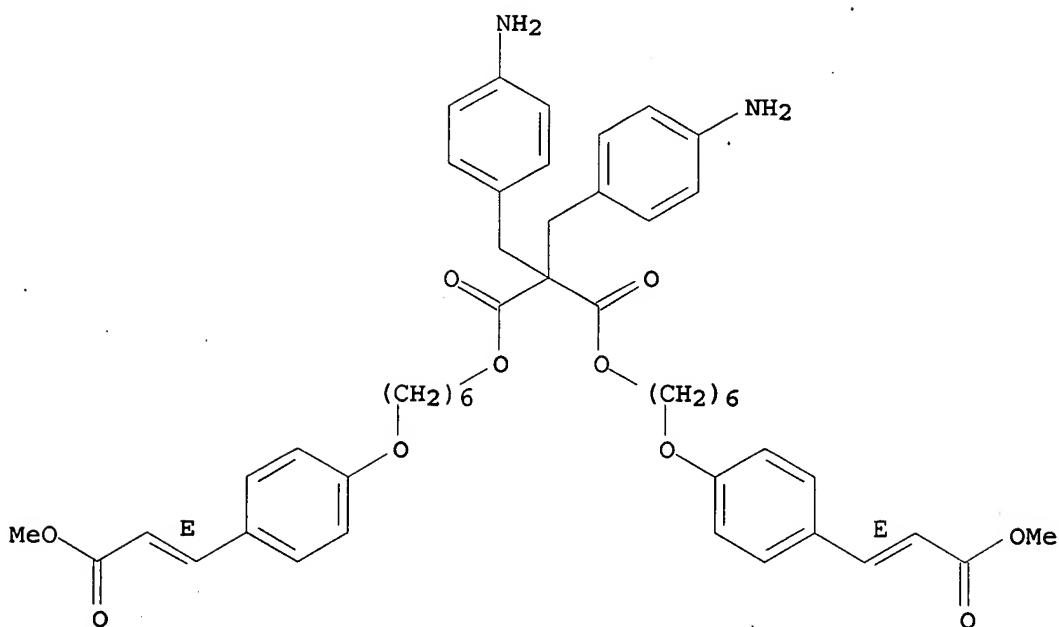
CRN 4415-87-6
CMF C8 H4 O6

RN 653571-26-7 HCAPLUS
 CN Propanedioic acid, bis[(4-aminophenyl)methyl]-, bis[6-[4-[(1E)-3-methoxy-3-oxo-1-propenyl]phenoxy]hexyl] ester, stereoisomer, polymer with tetrahydropyranobuta[1,2-c:3,4-c']difurantetron (9CI) (CA INDEX NAME)

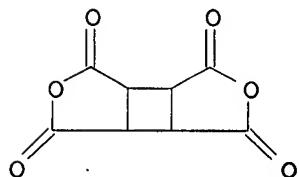
CM 1

CRN 653571-25-6
CMF C49 H58 N2 O10

Double bond geometry as shown.



CM 2

CRN 4415-87-6
CMF C8 H4 O6IT 653306-91-3P 653307-25-6P 653307-36-9P
653307-62-1P

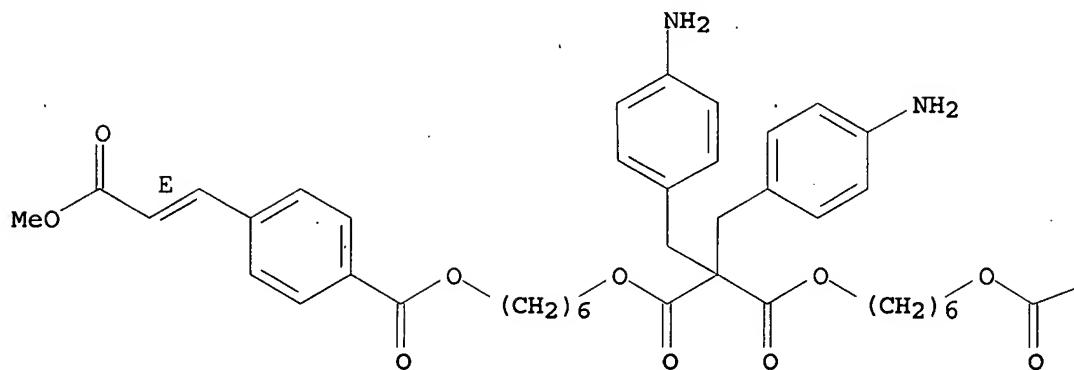
(preparation and polymerization; photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)

RN 653306-91-3 HCPLUS

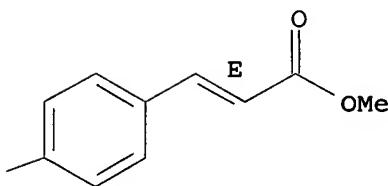
CN Propanedioic acid, bis[(4-aminophenyl)methyl]-, bis[6-[[4-[(1E)-3-methoxy-3-oxo-1-propenyl]benzoyl]oxy]hexyl] ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



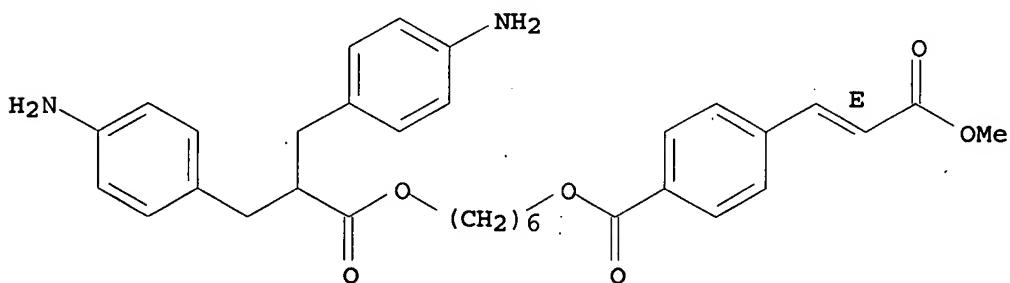
PAGE 1-B



RN 653307-25-6 HCPLUS

CN Benzenepropanoic acid, 4-amino- α -[(4-aminophenyl)methyl]-, 6-[[4-[(1E)-3-methoxy-3-oxo-1-propenyl]benzoyl]oxy]hexyl ester (9CI)
(CA INDEX NAME)

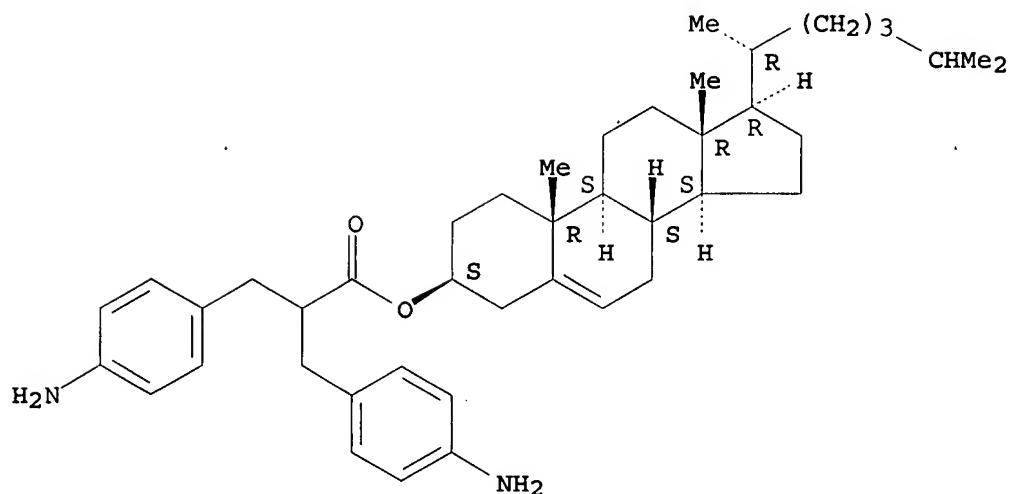
Double bond geometry as shown.



RN 653307-36-9 HCPLUS

CN Cholest-5-en-3-ol (3 β)-, 4-amino- α -[(4-aminophenyl)methyl]benzenepropanoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.

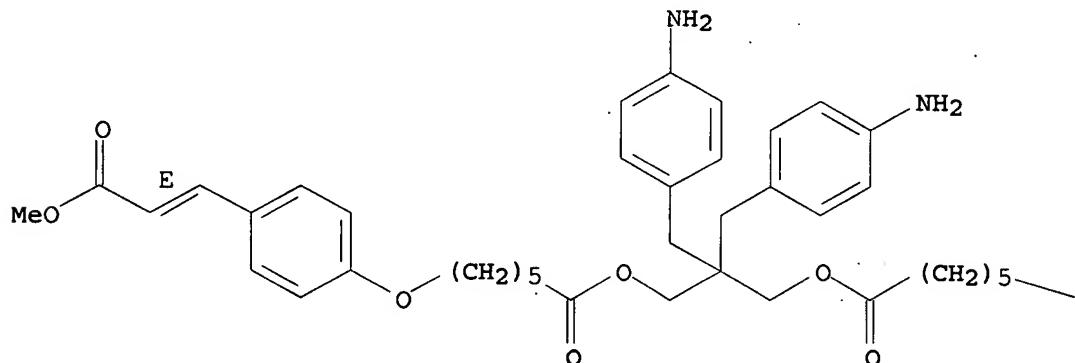


RN 653307-62-1 HCAPLUS

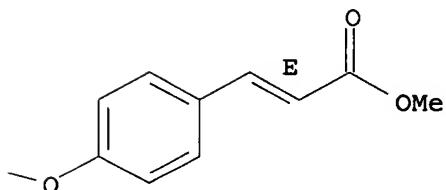
CN Hexanoic acid, 6-[4-[(1E)-3-methoxy-3-oxo-1-propenyl]phenoxy]-, 2,2-bis[(4-aminophenyl)methyl]-1,3-propanediyl ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.

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PAGE 1-B



IC ICM C07C229-42
 ICS C07J041-00; C08G073-10; G02F001-1337; C09K019-56
 CC 35-4 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 75
 ST liq crystal alignment layer display device; photoreactive diamine polyimide alignment layer
 IT Amines, reactions
 (diamines, diarom.; photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)
 IT Electrooptical imaging devices
 Light-sensitive materials
 Liquid crystal displays
 Liquid crystals
 Liquid crystals, polymeric
 Optical instruments
 (photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)
 IT Polyamic acids
 Polyimides, preparation
 (photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)
 IT 653307-14-3P 653307-31-4P 653307-55-2P
 (dehydration; photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)
 IT 653306-84-4P 653307-19-8P 653307-81-4P
 (monomer precursor; photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)
 IT 439798-60-4, MLC 12000-000
 (nematic; photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)
 IT 83540-57-2P, 2,2-Dimethyl-5,5-bis(4-nitrobenzyl)-1,3-dioxane-4,6-dione
 653307-75-6P
 (photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)
 IT 653307-88-1P 653307-93-8P 653307-98-3P
 653308-06-6P 653308-15-7P 653308-24-8P
 653308-36-2P 653308-42-0P 653308-50-0P
 653308-55-5P 653308-62-4P 653571-26-7P
 654062-54-1P 654062-55-2P 654062-56-3P 654062-57-4P
 654062-60-9P 654062-61-0P
 (photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)
 IT 57-88-5, 5-Cholesten-3 β -ol, reactions 100-11-8, 4-Nitrobenzyl bromide 141-82-2D, Malonic acid, ester 2009-83-8, 6-Chlorohexanol 3943-97-3, Methyl 4-hydroxycinnamate 4224-70-8, 6-Bromohexanoic acid 115974-97-5
 (photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)
 IT 653306-91-3P 653307-25-6P 653307-36-9P
 653307-62-1P

(preparation and polymerization; photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)

IT 653307-04-1P
 (reaction with Me carboxycinnamate; photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)

IT 653307-48-3P
 (reaction with Me hydroxycinnamate; photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)

IT 653307-42-7P
 (reaction with bromohexanoic acid; photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)

IT 653306-99-1P 653307-69-8P
 (reaction with chlorohexanol; photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)

IT 117076-44-5
 (reaction with malonic acid ester; photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)

IT 2033-24-1, Meldrum's acid
 (reaction with nitrobenzyl bromide; photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)

IT 121-33-5, Vanillin
 (reaction with pentyl bromide; photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)

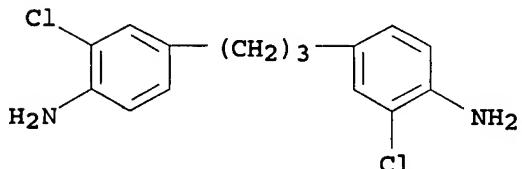
IT 110-53-2, n-Pentyl bromide
 (reaction with vanillin; photoreactive diamine precursors for photosensitive polymer materials with good light stability for liquid crystal orientation layers)

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 4 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2003:994879 HCAPLUS
 DOCUMENT NUMBER: 141:124148
 TITLE: Preparation of high-strength polyurethane elastic prepolymer and its application
 INVENTOR(S): Cong, Shufeng; Yu, Luru
 PATENT ASSIGNEE(S): Peop. Rep. China
 SOURCE: Faming Zhanli Shenqing Gongkai Shuomingshu, 11 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1392171	A	20030122	CN 2002-137963 ---	20020712
PRIORITY APPLN. INFO.:			CN 2002-137963 ---	20020712

ED Entered STN: 22 Dec 2003
 AB The raw material is composed of 2,4-tolylene diisocyanate 0- 19.0, 4,4'-methylenediphenylene diisocyanate 17.0-51.0, polyether glycol 46.0-61.0, tribasic alc. (such as tri(hydroxymethyl)propane or polyether tribasic alc.) 2.0-13.0, and H₃PO₄ as stabilizing agent 0.01-0.05%. The process comprises dewatering polyol at 80-120° and 0.4- 6 MPa or via refluxing with xylene as entrainer to water content ≤0.05%, adding 1/2-2/3 of stabilizing agent and diisocyanate at <50°, stirring at 60-90° to NCO content of 5-10.5%, cooling to ≤50°, adding the other part of stabilizing agent, filtering, and packaging. The prepolymer may be used as one component of double- component paving material. The double-component paving material is composed of 1 part prepolymer and 2-4 part component B. The component B is composed of polyether polyol 19.8-43.1, crosslinking agent (such as 4,4'-methylenebis(2-chloroaniline), 3,3'-methylenebis(6-aminobenzoic acid Me ester), bis(3-amino-4- chlorophenyl) carbonate, 3-(3-amino-4-chlorophenyl)propanoic acid 3-amino-4-chlorophenyl ester, or 4,4'-trimethylenebis(2- chloroaniline)) 1.4-5.4, filler 37.9-41.9, pigment 2.3-2.7, plasticizer (such as di-Bu phthalate, dioctyl phthalate, or chlorinated paraffin wax) 14.7-30.0, and adjuvant (such as UV screener, antioxidant, and antiseptic agent) 0.2-0.6%.
 IT 724751-44-4DP, polyurea derivative
 (crosslinked; preparation of high-strength polyurethane elastic prepolymer and its application)
 RN 724751-44-4 HCPLUS
 CN Benzenamine, 4,4'-(1,3-propanediyl)bis[2-chloro- (9CI) (CA INDEX NAME)



IC ICM C08G018-10
 ICS C09D175-04
 CC 35-5 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 39
 IT 101-14-4DP, Benzenamine, 4,4'-methylenebis[2-chloro-], polyurea derivative
 29545-01-5DP, polyurea derivative 31383-81-0DP, polyurea derivative
 724751-42-2DP, polyurea derivative 724751-44-4DP, polyurea derivative
 (crosslinked; preparation of high-strength polyurethane elastic prepolymer and its application)

L26 ANSWER 5 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2002:594853 HCPLUS
 DOCUMENT NUMBER: 137:154933
 TITLE: Heterocyclic compounds and cerebral function improvers containing them as active ingredients
 INVENTOR(S): Kawashima, Seiichiro; Matsuno, Toshiyuki; Fukuda, Naoki; Saitoh, Kenichi; Yamaguchi, Yoshimasa; Higashi, Masaya
 PATENT ASSIGNEE(S): Zenyaku Kogyo Kabushiki Kaisha, Japan
 SOURCE: PCT Int. Appl., 35 pp.
 CODEN: PIXXD2

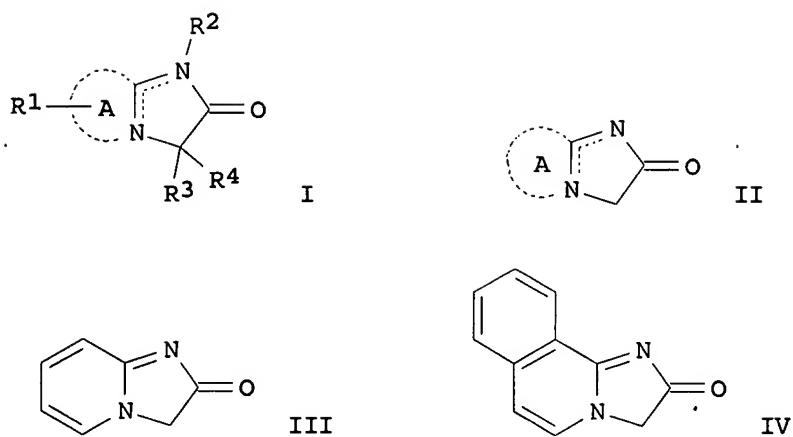
DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002060907	A1	20020808	WO 2002-JP694	20020130
			<--	
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
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			<--	
AU 2002230098	A1	20020812	AU 2002-230098	20020130
			<--	
EP 1357124	A1	20031029	EP 2002-711234	20020130
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EP 1357124	B1	20050803		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CN 1531540	A	20040922	CN 2002-807625	20020130
			<--	
AT 301125	T	20050815	AT 2002-711234	20020130
			<--	
ES 2247304	T3	20060301	ES 2002-2711234	20020130
			<--	
US 2004048879	A1	20040311	US 2003-466321	20030729
			<--	
US 7141579	B2	20061128		
US 2006205742	A1	20060914	US 2006-433416	20060515
			<--	
PRIORITY APPLN. INFO.:			JP 2001-22385	A 20010130
			<--	
			WO 2002-JP694	W 20020130
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			US 2003-466321	A3 20030729
			<--	

OTHER SOURCE(S): MARPAT 137:154933

ED Entered STN: 09 Aug 2002

GI

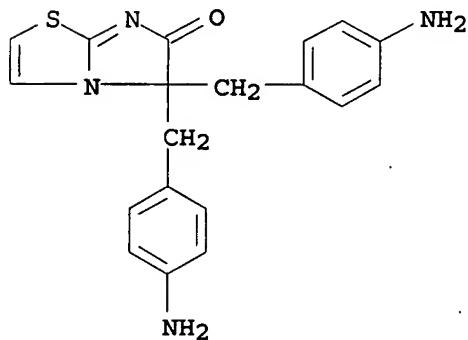


AB Heterocyclic compds. I [R1 = H, C1-6 alkyl, or benzyloxy; R2 = Me or nil; R3 = H, C1-6 alkyl, C2-6 alkenyl, C3-8 cycloalkyl, CH2R5; R5 = Ph (which may be substituted with C1-6 alkyl, halogeno, or cyano group), thienyl; R4 =C1-6 alkyl, C2-6 alkenyl, C3-8 cycloalkyl, or CH2R6; R6 = Ph (which may be substituted with C1-6 alkyl, halogeno, or cyano groups), naphthyl, thienyl; alternatively R3 and R4 may be united] bearing skeleton II, such as III, IV, etc., are prepared. These compds., such as 5,5-bis(4-fluorobenzyl)imidazo[2,1-b]thiazole-6(5H)-one, are useful for treatment of Alzheimer's disease, Parkinson's disease, etc.

IT 445400-15-7P, 5,5-Bis(4-aminobenzyl)imidazo[2,1-b]thiazole-6(5H)-one
(heterocyclic compds. for cerebral function improvers)

RN 445400-15-7 HCPLUS

CN Imidazo[2,1-b]thiazol-6(5H)-one, 5,5-bis[(4-aminophenyl)methyl]- (9CI)
(CA INDEX NAME)



IC ICM C07D513-04
ICS C07D487-04; C07D471-04; C07D513-20; C07D233-70; A61K031-429;
A61K031-519; A61K031-437; A61K031-4745; A61K031-4166

CC 28-9 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 63

IT 445400-11-3P, 5,5-Bis(4-fluorobenzyl)imidazo[2,1-b]thiazole-6(5H)-one
445400-12-4P, 5,5-Dibenzylimidazo[2,1-b]thiazole-6(5H)-one
445400-13-5P, 3,3-Dibenzylimidazo[1,2-a]pyrimidine-2(3H)-one
445400-14-6P, 5,5-Bis(4-methylbenzyl)imidazo[2,1-b]thiazole-6(5H)-one
445400-15-7P, 5,5-Bis(4-aminobenzyl)imidazo[2,1-b]thiazole-

6 (5H) -one 445400-16-8P, 5,5-Dibenzyl-2-methylimidazo[2,1-b]thiazole-
 6 (5H) -one 445400-17-9P, 5,5-Bis(2-thienylmethyl)imidazo[2,1-
 b]thiazole-6 (5H) -one 445400-18-0P, 3,3-Bis(2-
 thienylmethyl)imidazo[1,2-a]pyrimidine-2(3H)-one 445400-19-1P,
 5,5-Dibenzyl-2,3-dihydroimidazo[2,1-b]thiazole-6 (5H) -one
 445400-20-4P 445400-21-5P 445400-22-6P, 3,3-Dicyclohexyl-5,6,7,8-
 tetrahydroimidazo[1,2-a]pyridine-2(3H)-one 445400-23-7P,
 3,3-Dibutyl-5,6,7,8-tetrahydroimidazo[1,2-a]pyridine-2(3H)-one
 445400-24-8P, 3-Benzylimidazo[1,2-a]pyridine-2(3H)-one 445400-25-9P,
 3,3-Dipropyl-5,6,7,8-tetrahydroimidazo[1,2-a]pyridine-2(3H)-one
 445400-26-0P, 4,4-Dibenzyl-1-methyl-5-oxo-4,5-dihydroimidazole
 445400-27-1P, 3,3-Di(2-but enyl)imidazo[1,2-a]pyridine-2(3H)-one
 445400-28-2P 445400-29-3P 445400-30-6P 445400-31-7P
 445400-32-8P 445400-33-9P 445400-34-0P 445400-35-1P
 445400-36-2P 445400-37-3P 445400-38-4P 445400-39-5P
 445400-40-8P 445400-41-9P 445400-42-0P

(heterocyclic compds. for cerebral function improvers)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

L26 ANSWER 6 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:586133 HCAPLUS

DOCUMENT NUMBER: 137:301256

TITLE: Electrosynthesis of dibenzonaphthyridine
 derivatives from 2,2-bis(2-nitrobenzyl)-2-
 substituted-acetonitriles

AUTHOR(S): Jan, Thierry; Dupas, Beatrice; Floner, Didier;
 Moinet, Claude

CORPORATE SOURCE: Campus de Beaulieu, Institut de Chimie de Rennes,
 Laboratoire d'Electrochimie et Organometalliques,
 Universite de Rennes 1, UMR CNRS 6509, Rennes,
 35042, Fr.

SOURCE: Tetrahedron Letters (2002), 43(34),
 5949-5952

PUBLISHER: CODEN: TELEAY; ISSN: 0040-4039
 Elsevier Science Ltd.

DOCUMENT TYPE: Journal
 LANGUAGE: English

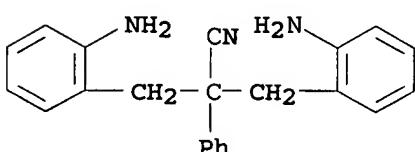
ED Entered STN: 07 Aug 2002

AB An indirect electrochem. procedure involving an ex-cell two-phase
 process is proposed to produce dibenzonaphthyridine derivs. from
 2,2-bis(2-nitrobenzyl)-2-substituted-acetonitriles in dichloromethane.
 The selective reduction of both nitro groups into amino groups using
 Cp₂Ti₂ + in aqueous acidic medium avoids a cyclization of hydroxylamine
 intermediates as observed by direct electrolysis.

IT 470448-85-2P
 (preparation in electrochem. reductive cyclization of
 bis(nitrobenzyl)-substituted acetonitriles)

RN 470448-85-2 HCAPLUS

CN Benzenepropanenitrile, 2-amino- α -[(2-aminophenyl)methyl]- α -
 phenyl- (9CI) (CA INDEX NAME)



CC 72-4 (Electrochemistry)
 Section cross-reference(s): 22, 27, 28
 IT 470448-85-2P
 (preparation in electrochem. reductive cyclization of
 bis(nitrobenzyl)-substituted acetonitriles)
 REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

L26 ANSWER 7 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:342082 HCPLUS

DOCUMENT NUMBER: 125:85904

TITLE: New Models for the Study of the Racemization
 Mechanism of Carbodiimides. Synthesis and
 Structure (X-ray Crystallography and ^1H NMR) of
 Cyclic Carbodiimides

AUTHOR(S): Molina, Pedro; Alajarin, Mateo; Sanchez-Andrada,
 Pilar; Carrio, Juan Server; Martinez-Ripoll,
 Martin; Anderson, J. Edgar; Jimeno, Maria Luisa;
 Elguero, Jose

CORPORATE SOURCE: Facultad de Quimica, Universidad de Murcia,
 Murcia, E-30071, Spain

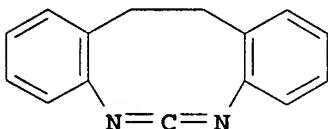
SOURCE: Journal of Organic Chemistry (1996),
 61(13), 4289-4299

PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English

OTHER SOURCE(S): CASREACT 125:85904

ED Entered STN: 14 Jun 1996

GI



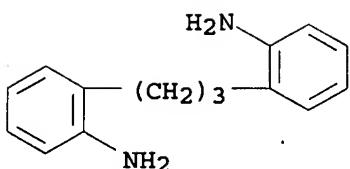
I

AB The crystal and mol. structure of carbodiimides 2 (5,6,18,19-tetrahydro-5,12,13,18,25,26-hexahydrotetrabenzo[d,h,m,q][1,3,10,12]tetraazacyclooctadecine) and 3 (8,10,22,24-tetraazapentacyclo[23.3.1.13,7.111,15.117,21]dotriaconta-1(29),3,5,7(32),8,9,11,13,15(31),17,19,21(30),22,23,25,27-hexadecaene) have been determined. The activation barriers for the racemization of carbodiimides I (6,7-dihydrodibenzo[d,h][1,3]diazonine), 2, and 3 have been determined. While I presents a relatively high barrier (17.4 kcal mol⁻¹), 2 and 3 have very low activation barriers (between 5 and 7 kcal mol⁻¹). We tentatively conclude that open-chain and large-ring carbodiimides racemize by nitrogen inversion or trans-rotation while medium-size cyclic carbodiimides racemize by cis-rotation.

IT 21598-82-3P
 (preparation, crystallog., and ^1H NMR of cyclic carbodiimides and models for racemization mechanism of carbodiimides)

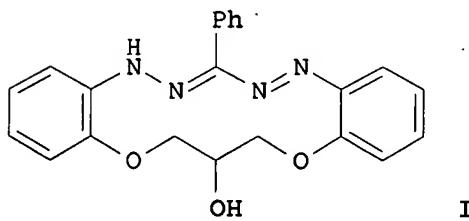
RN 21598-82-3 HCPLUS

CN Benzenamine, 2,2'-(1,3-propanediyl)bis- (CA INDEX NAME)



CC 22-3 (Physical Organic Chemistry)
 Section cross-reference(s): 34, 75
 IT 552-89-6P 21598-82-3P 28096-87-9P 42467-39-0P
 42467-40-3P 116668-54-3P 178265-01-5P 178265-02-6P
 178265-03-7P 178265-09-3P 178265-10-6P 178265-11-7P
 178265-12-8P 178265-13-9P 178265-14-0P 178265-15-1P
 178265-16-2P 178265-17-3P 178265-18-4P 178265-19-5P
 178265-20-8P 178265-21-9P 178265-22-0P 178265-23-1P
 178265-24-2P 178265-25-3P
 (preparation, crystallog., and ^1H NMR of cyclic carbodiimides and models
 for racemization mechanism of carbodiimides)

L26 ANSWER 8 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1995:66082 HCAPLUS
 DOCUMENT NUMBER: 122:31472
 TITLE: Synthesis of the first lariat crown-formazan,
 prototype of a new series of podandocoronands
 AUTHOR(S): Katrizky, Alan R.; Belyakov, Sergei A.; Durst, H.
 Dupont
 CORPORATE SOURCE: Center for Heterocyclic Compounds, University of
 Florida, Gainesville, FL, 32611-7200, USA
 SOURCE: Tetrahedron Letters (1994), 35(35),
 6465-8
 CODEN: TELEAY; ISSN: 0040-4039
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ED Entered STN: 08 Nov 1994
 GI

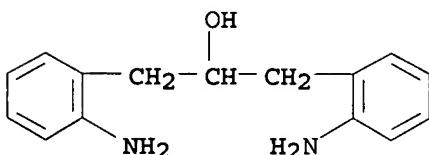


AB Crown formazan (I) with a pendant hydroxy group [i.e., 16,17-dihydro-7-phenyl-5H,15H-Dibenzo[b,i][1,11,4,5,7,8]dioxatetraazacyclotetradecin-13-ol] was obtained by a phase-transfer assisted azo-coupling reaction. Acylation of the hydroxy group of I with 2-chloroacetyl chloride followed by reaction with dimethylamine afforded 13-[2-(N,N-dimethylamino)acetoxy]-16,17-phenyl-5H,15-dibenzo[b,i][1,11,4,5,7,8]dioxatetraazacyclotetradecyne, the first lariat crown formazan containing a strong donor group as a supporting ligand at the end of the side arm.
 IT 159680-10-1P

(preparation of crown formazan dibenzo[b,i][1,11,4,5,7,8]dioxatetraazacyclotetradecin-13-ol)

RN 159680-10-1 HCPLUS

CN Benzeneethanol, 2-amino- α -[(2-aminophenyl)methyl]- (9CI) (CA INDEX NAME)



CC 28-20 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 159680-04-3P 159680-06-5P 159680-07-6P 159680-09-8P,

1,3-Bis(2-nitrophenyl)-2-propanol 159680-10-1P

(preparation of crown formazan dibenzo[b,i][1,11,4,5,7,8]dioxatetraazacyclotetradecin-13-ol)

L26 ANSWER 9 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:650630 HCPLUS

DOCUMENT NUMBER: 119:250630

TITLE: Structure-property relationships in polymerization of monomeric reactant type polyimide resins. 2.

New polyimides incorporating alkyleneedianilines

Woodfine, Barry; Soutar, Ian; Preston, Peter N.; Jigajinni, Veerappa B.; Stewart, Nevin J.; Hay, John N.

CORPORATE SOURCE: Sch. Phys. Mater., Lancaster Univ., Lancaster, LA1 4YA, UK

SOURCE: Macromolecules (1993), 26(24), 6330-4
CODEN: MAMOBX; ISSN: 0024-9297

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 11 Dec 1993

AB New polyimide thermoset resins have been synthesized incorporating alkyleneedianilines as the diamine components. The variations in intrinsic chain mobility resultant upon differences in the alkylene chain lengths produced cured resins which exhibited a wide range of glass transition values (290-386°). The structural variants of diamine within the resin formulations also effected lowering of the apparent onset temps. for crosslinking, during cure, as the alkylene spacer units were extended. All resins exhibited good thermal and thermooxidative stabilities, with temps. for 10% weight loss at 450-500°.

IT 151197-66-9P
(crosslinked, preparation and thermal properties of)

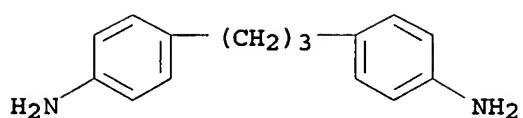
RN 151197-66-9 HCPLUS

CN 4,7-Methanoisobenzofuran-1,3-dione, 3a,4,7,7a-tetrahydro-, (3a α ,4 α ,7 α ,7a α)-, polymer with 5,5'-carbonylbis[1,3-isobenzofurandione] and 4,4'-(1,3-propanediyl)bis[benzenamine] (9CI) (CA INDEX NAME)

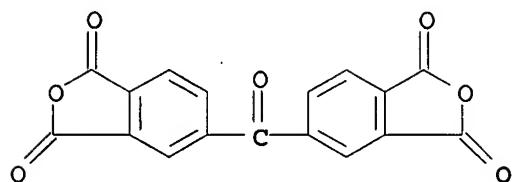
CM 1

CRN 2767-73-9

CMF C15 H18 N2



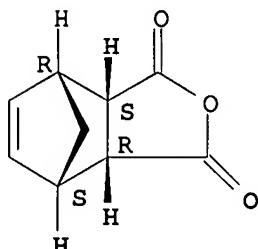
CM 2

CRN 2421-28-5
CMF C17 H6 O7

CM 3

CRN 129-64-6
CMF C9 H8 O3

Relative stereochemistry.



CC 35-5 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 36
 IT 34406-24-1P 151197-64-7P 151197-65-8P 151197-66-9P
 151197-67-0P
 (crosslinked, preparation and thermal properties of)

L26 ANSWER 10 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1993:534909 HCAPLUS
 DOCUMENT NUMBER: 119:134909
 TITLE: Synthesis and applications of phosphonoacetic derivatives
 AUTHOR(S): Davini, Enrico; Di Leo, Cristina; Norelli, Francesco; Zappelli, Piergiorgio
 CORPORATE SOURCE: Eniricerche SpA, Monterotondo Scalo, Italy
 SOURCE: Journal of Biotechnology (1993), 28(2-3), 321-38
 CODEN: JBITD4; ISSN: 0168-1656
 DOCUMENT TYPE: Journal
 LANGUAGE: English

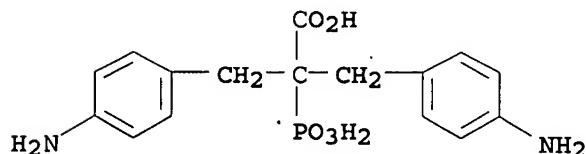
ED Entered STN: 02 Oct 1993

AB The synthesis of new phosphonoacetic acid derivs. and their applications in fields of biotechnol. interest are discussed. Phosphonoacetic acids are competitive inhibitors of alkaline phosphatase, an enzyme widely used in diagnostics, as colorimetric detection tool. The phosphonoacetic acid's inhibition activity has been used to obtain an innovative technique for non-radioactive DNA probes detection, the last being based on DNA labeling with the enzyme inhibitor, followed by detection by means of the chromogenic enzyme and substrate. Moreover, a further application of phosphonoacetic acids was found by the preparation of an affinity chromatog. support that has been revealed to be very effective in the purification of alkaline phosphatase. Finally, phosphonoacetic acid derivs. have been tested also for their antiviral activity. Some of them, examined in preliminary in vitro expts., have been found very active against Herpes simplex virus.

IT 149695-58-9P

(preparation and virucidal activity of)

RN 149695-58-9 HCPLUS

CN Benzenepropanoic acid, 4-amino- α -[(4-aminophenyl)methyl]- α -phosphono- (9CI) (CA INDEX NAME)

CC 9-14 (Biochemical Methods)

Section cross-reference(s): 7, 10, 29

IT 149695-56-7P 149695-57-8P 149695-58-9P
(preparation and virucidal activity of)

L26 ANSWER 11 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:149540 HCPLUS

DOCUMENT NUMBER: 118:149540

TITLE: Polyimide and polyimide-polyurethane coatings, and their solderable electrically insulated wires and flyback transformers therefrom

INVENTOR(S): Tajima, Tetsuo; Sudo, Ryoichi; Obata, Makoto; Shoji, Fusaji; Kitatani, Kimikatsu; Oikawa, Hiroshige

PATENT ASSIGNEE(S): Hitachi, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 47 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

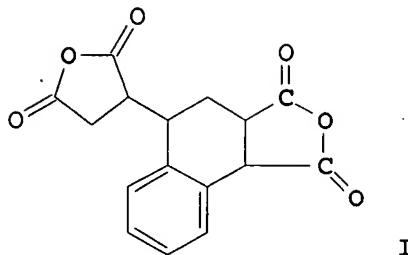
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04212206	A	19920803	JP 1991-62316	19910327 <--
US 5254659	A	19931019	US 1991-675951	19910327 <--
PRIORITY APPLN. INFO.:			JP 1990-77309	A1 19900327 <--

JP 1990-96428	A1 19900413
<--	
JP 1990-233254	A1 19900905
<--	
JP 1990-252547	A1 19900920
<--	

ED Entered STN: 13 Apr 1993
 GI



AB Title coatings are manufactured by applying solns. containing polyamic acids (A) optionally terminated by hydroxy(ar)alkyl groups and solns. containing products of the hydroxy(ar)alkyl group-terminated polyamic acids and diisocyanates, resp., onto the wires and thermally imidating. Thus, a solution containing p-aminobenzyl alc.-terminated 2,2-bis[4-(4-aminophenoxy)phenyl]propane-dianhydride I polyamic acid was spread on a Cu wire and baked to give a 20- μ m elec. insulating film showing softening temperature (500-g load) 352° and soldering ability 9 s at 390° or 5 s at 450°.

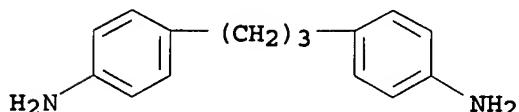
IT 146323-34-4DP, reaction products with aminobenzyl alc.
 146323-39-9DP, reaction products with aminobenzyl alc.
 146323-40-2DP, reaction products with aminobenzyl alc.
 146323-40-2P 146545-87-1P
 (manufacture of, as heat-resistant elec.-insulating coatings)

RN 146323-34-4 HCAPLUS

CN [5,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with
 4,4'-(1,3-propanediyl)bis[benzenamine] (9CI) (CA INDEX NAME)

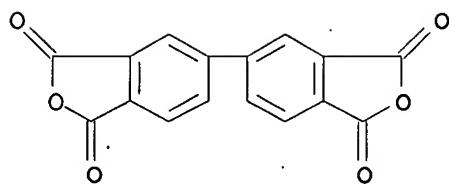
CM 1

CRN 2767-73-9
 CMF C15 H18 N2



CM 2

CRN 2420-87-3
 CMF C16 H6 O6



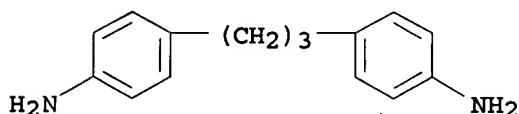
RN 146323-39-9 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-(1-methylethyldene)bis-, polymer with
4,4'-(1,3-propanediyl)bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2767-73-9

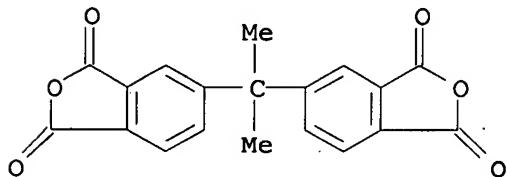
CMF C15 H18 N2



CM 2

CRN 1779-17-5

CMF C19 H12 O6



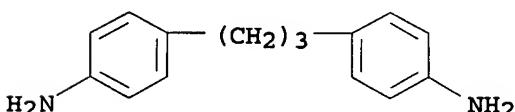
RN 146323-40-2 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with
4,4'-(1,3-propanediyl)bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2767-73-9

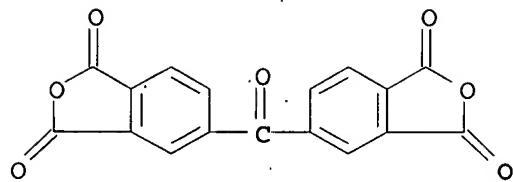
CMF C15 H18 N2



CM 2

CRN 2421-28-5

CMF C17 H6 O7



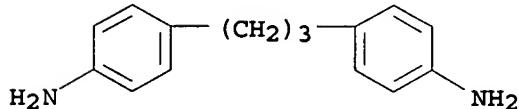
RN 146323-40-2 HCPLUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with
4,4'-(1,3-propanediyl)bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2767-73-9

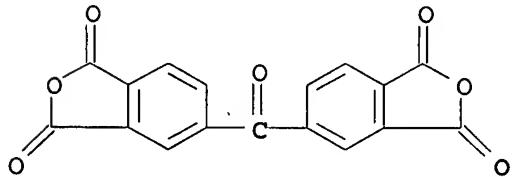
CMF C15 H18 N2



CM 2

CRN 2421-28-5

CMF C17 H6 O7



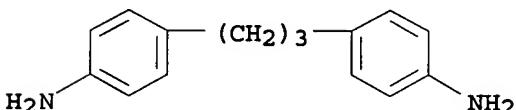
RN 146545-87-1 HCPLUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with
4-(aminomethyl)phenol, 1,1'-methylenebis[4-isocyanatobenzene] and
4,4'-(1,3-propanediyl)bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

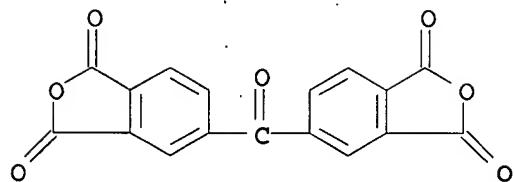
CRN 2767-73-9

CMF C15 H18 N2



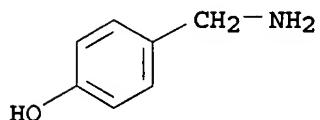
CM 2

CRN 2421-28-5
 CMF C17 H6 O7



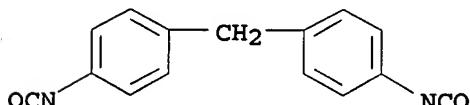
CM 3

CRN 696-60-6
 CMF C7 H9 N O



CM 4

CRN 101-68-8
 CMF C15 H10 N2 O2



IC ICM H01B003-30
 ICS C08G018-60; C08G073-10; C09D175-00; C09D179-08; H01B007-02;
 H01B007-34; H01B013-16; H01F019-04
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 76
 IT 623-04-1DP, p-Aminobenzyl alcohol, polyimide derivs. 28347-97-9P
 32824-21-8DP, reaction products with aminobenzyl alc. 36496-83-0P
 38547-25-0DP, reaction products with aminobenzyl alc. 56778-02-0DP,
 reaction products with aminobenzyl alc. 87516-93-6DP, reaction
 products with aminobenzyl alc. 131495-60-8P 134770-29-9DP,
 reaction products with aminobenzyl alc. 146323-25-3DP, reaction
 products with aminobenzyl alc. 146323-25-3P 146323-26-4DP,
 reaction products with aminobenzyl alc. 146323-27-5DP, reaction
 products with aminobenzyl alc. 146323-29-7DP, reaction products with
 aminobenzyl alc. 146323-31-1DP, reaction products with aminobenzyl
 alc. 146323-32-2DP, reaction products with aminobenzyl alc.
 146323-32-2P 146323-33-3DP, reaction products with aminobenzyl alc.
 146323-33-3P 146323-34-4DP, reaction products with
 aminobenzyl alc. 146323-35-5DP, reaction products with aminobenzyl
 alc. 146323-36-6DP, reaction products with aminobenzyl alc.

146323-37-7DP, reaction products with aminobenzyl alc.
 146323-38-8DP, reaction products with aminobenzyl alc.
 146323-39-9DP, reaction products with aminobenzyl alc.
 146323-40-2DP, reaction products with aminobenzyl alc.
 146323-40-2P 146323-41-3DP, reaction products with aminobenzyl alc. 146343-42-2DP, reaction products with aminobenzyl alc. 146343-42-2P 146343-43-3DP, reaction products with aminobenzyl alc. 146343-43-3P 146343-44-4DP, reaction products with aminobenzyl alc. 146343-46-6DP, reaction products with aminobenzyl alc. 146393-73-9P 146393-74-0P 146393-75-1P
 146393-76-2P 146393-77-3P 146393-78-4P 146393-79-5P
 146393-80-8P 146393-81-9P 146393-82-0P 146393-83-1P
 146393-84-2P 146393-85-3P 146393-86-4P 146393-87-5P
 146393-88-6P 146393-89-7P 146393-90-0P 146393-91-1P
 146393-92-2P 146393-93-3P 146393-94-4P 146393-95-5P
 146401-75-4P 146401-76-5P 146401-77-6P 146401-78-7P
 146401-79-8P 146401-80-1P 146429-01-8P 146473-49-6P
 146526-94-5P 146526-95-6P 146526-96-7P 146526-97-8P
 146526-98-9P 146526-99-0P 146527-00-6P 146527-01-7P
146545-87-1P

(manufacture of, as heat-resistant elec.-insulating coatings)

L26 ANSWER 12 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:44063 HCPLUS

DOCUMENT NUMBER: 114:44063

TITLE: Effect of monomer structure on the cure of PMR polyimides

AUTHOR(S): Preston, P. N.; Soutar, I.; Woodfine, B.; Hay, J. N.; Stewart, N. J.

CORPORATE SOURCE: Chem. Dep., Heriot-Watt Univ., Edinburgh, EH14 4AS, UK

SOURCE: High Performance Polymers (1990), 2(1), 47-56

CODEN: HPPOEX; ISSN: 0954-0083

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 09 Feb 1991

AB Investigation of the influence that monomer structure, (diamines and dianhydrides [MeO₂(C₆H₃)CO₂H]₂X), plays in determination of the nature of thermoset PMR polyimides revealed new information about the crosslinking reaction profile and resultant resin properties.

Replacement of dianhydride (X = CO) by dianhydride (X = O) gave reduced resin glass temperature, T_g, values. Synthesis of a new series of alkylene dianilines, with increasing flexibility within the homologous series, evinced lowered crosslinking onset temps. and T_g transitions. Increasing degrees of meta catenation in extended diamines also resulted in lowered T_g values. Recycling behavior of polyimides were also discussed.

IT 131494-85-4 131494-86-5

(cure of, properties in relation to)

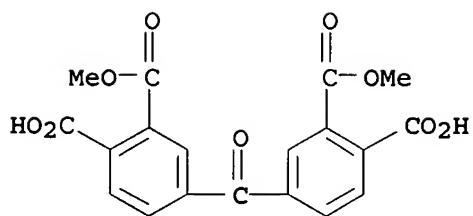
RN 131494-85-4 HCPLUS

CN 1,2-Benzenedicarboxylic acid, 4,4'-carbonylbis-, 2,2'-dimethyl ester, polymer with 4,4'-(1,3-propanediyl)bis[benzenamine] (9CI) (CA INDEX NAME)

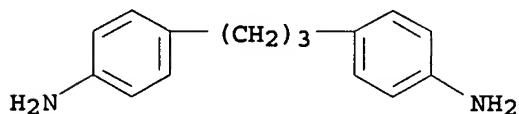
CM 1

CRN 47587-11-1

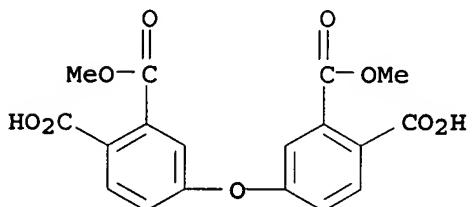
CMF C19 H14 O9



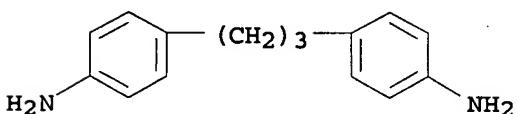
CM 2

CRN 2767-73-9
CMF C15 H18 N2RN 131494-86-5 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4,4'-oxybis-, 2,2'-dimethyl ester,
polymer with 4,4'-(1,3-propanediyl)bis[benzenamine] (9CI) (CA INDEX
NAME)

CM 1

CRN 131494-79-6
CMF C18 H14 O9

CM 2

CRN 2767-73-9
CMF C15 H18 N2CC 37-4 (Plastics Manufacture and Processing)
IT 24991-11-5 25735-00-6 25735-01-7 26615-47-4 26913-87-1

26951-75-7	27614-14-8	34871-01-7	54571-75-4	54571-76-5
56585-71-8	69572-56-1	69572-62-9	72344-67-3	72344-77-5
74970-13-1	76309-08-5	91993-29-2	98847-60-0	101526-08-3
105117-50-8	105117-51-9	111966-59-7	127432-99-9	131494-78-5
131494-80-9	131494-81-0	131494-82-1	131494-83-2	131494-84-3
131494-85-4	131494-86-5	131494-87-6	131494-88-7	
131494-90-1	131494-91-2	131494-92-3	131494-93-4	131494-94-5
131494-95-6	131495-59-5	131495-60-8	131495-61-9	131495-62-0
131495-63-1	131519-31-8	131519-32-9	131519-33-0	131621-17-5
131621-18-6	131621-19-7	131621-20-0	131621-21-1	131621-22-2
131621-23-3	131621-24-4	131621-25-5	131621-26-6	131621-27-7
131621-28-8	131621-29-9	131621-30-2	131621-31-3	131621-32-4

(cure of, properties in relation to)

L26 ANSWER 13 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1986:69735 HCPLUS

DOCUMENT NUMBER: 104:69735

TITLE: Polyimide compositions and foams

INVENTOR(S): Gagliani, John; Long, John V.

PATENT ASSIGNEE(S): USA

SOURCE: U.S., 4 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4546115	A	19851008	US 1985-705129	19850225
US 4556682	A	19851203	US 1985-737083	19850523
EP 192869	A2	19860903	EP 1985-303940	19850604
EP 192869	A3	19880302	<--	
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
JP 61195126	A	19860829	JP 1985-121611	19850606
			<--	
PRIORITY APPLN. INFO.:			US 1985-705129	A3 19850225
			<--	

ED Entered STN: 08 Mar 1986

AB A polyimide precursor composition is prepared by esterifying an aromatic dianhydride with an esterifying solvent to form a half ester and adding a diamine mixture containing ≥ 1 diamine $4\text{-H}_2\text{NC}_6\text{H}_4(\text{CH}_2)_x\text{C}_6\text{H}_4\text{NH}_2\text{-4}$ ($x = 1\text{-}20$) and ≥ 1 diamine $\text{H}_2\text{N}(\text{CH}_2)_y\text{NH}_2$ ($y = 2\text{-}12$). A polyimide foam is prepared by drying the precursor composition, pulverizing to a powder, and heating the powder to cause melting, foaming, and polymerization. The foam is resilient, nonfriable, and flame resistant. Thus, 322.2 g 3,3',4,4'-benzophenonetetracarboxylic acid dianhydride was dissolved in approx. 400 g iso-PrOH, refluxed to give a clear solution, treated at .apprx.50° with .apprx.148.7 g of 4,4'-diaminodiphenylmethane and .apprx.29 g $\text{H}_2\text{N}(\text{CH}_2)_6\text{NH}_2$, heated at .apprx.55° until clear, dried at .apprx.82°, pulverized to give 80-mesh powder, and heated 1 h at .apprx.288° to prepare a foam (d. 12.8 kg/m³) which did not burn or give off toxic gas during exposure to a flame and was nonfriable.

IT 100328-46-9P 100339-07-9P

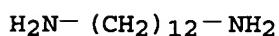
(preparation of cellular, nonfriable, fire-resistant, resilient)

RN 100328-46-9 HCPLUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with
 1,12-dodecanediamine and 4,4'-(1,3-propanediyl)bis[benzenamine] (9CI)
 (CA INDEX NAME)

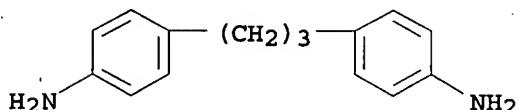
CM 1

CRN 2783-17-7
 CMF C12 H28 N2



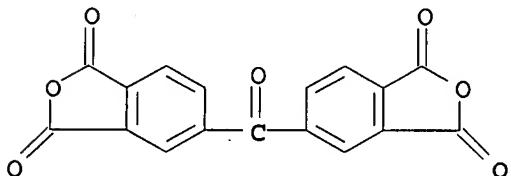
CM 2

CRN 2767-73-9
 CMF C15 H18 N2



CM 3

CRN 2421-28-5
 CMF C17 H6 O7

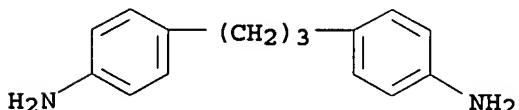


RN 100339-07-9 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with
 1,2-ethanediamine and 4,4'-(1,3-propanediyl)bis[benzenamine] (9CI)
 (CA INDEX NAME)

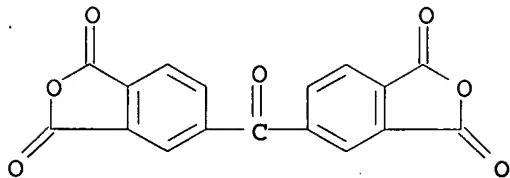
CM 1

CRN 2767-73-9
 CMF C15 H18 N2



CM 2

CRN 2421-28-5
CMF C17 H6 O7



CM 3

CRN 107-15-3
CMF C2 H8 N2

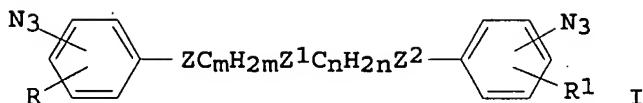
H₂N—CH₂—CH₂—NH₂

IC ICM C08J009-02
INCL 521077000
CC 37-6 (Plastics Manufacture and Processing)
IT 26873-92-7P 29252-15-1P 100328-46-9P 100328-47-0P
100328-48-1P 100339-06-8P 100339-07-9P
(preparation of cellular, nonfriable, fire-resistant, resilient)

L26 ANSWER 14 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1984:501235 HCAPLUS
DOCUMENT NUMBER: 101:101235
TITLE: Bisazide compounds, photosensitive compositions containing them and their use in preparing relief structures
INVENTOR(S): Haas, Guenther; Neisius, Karl Heinz
PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Fed. Rep. Ger.
SOURCE: Ger. Offen., 41 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3234301	A1	19840322	DE 1982-3234301 <--	19820916
EP 103800	A2	19840328	EP 1983-108727 <--	19830905
EP 103800 R: DE, FR, GB, NL JP 59073556	A3	19860129		
	A	19840425	JP 1983-169530 <--	19830916
PRIORITY APPLN. INFO.:			DE 1982-3234301 <--	A 19820916

OTHER SOURCE(S): MARPAT 101:101235
ED Entered STN: 15 Sep 1984
GI

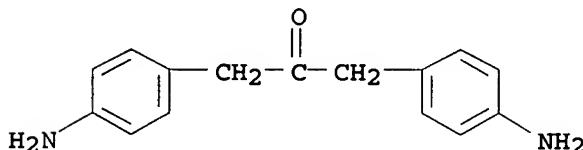


AB Bisazides of the formula I (R, R1 = H, halogen, or C1-6 alkyl; Z, Z2 = O, S, SO₂, NR₂, or a bond where R₂ = H or C1-6 alkyl; Z₁ = O, S, SO, NR₂, 2-oxo-1,3-cyclopenylene, 2-oxo- or 5-alkyl-1,3-cyclohexylene, or a bond; R₂ = H, halogen, or C1-6 alkyl; m, n = 1-8; and m + n ≤12) having a high sensitivity to UV light are useful as the photosensitive component of neg.-working UV-sensitive compns. for the photolithog. production of relief structures. Thus, a solution containing partially cyclized cis-1,4-polyisoprene 10, 1,2-bis(4-azidophenoxy)ethane 0.2, and xylene 100 g was coated on a surface oxidized Si plate and dried to give a 1μm thick layer. This plate was then exposed to far UV light (200-300 nm) through a Cr mask under a N₂ atmospheric and developed with a 1:1 hexane-xylene solution to give a relief image having good adhesion, outstanding etch resistance, and a high contrast. The resolving limit was from 0.5 to 2 μm.

IT 91707-43-6P
 (preparation and reaction of tetrazotized, with sodium azide)

RN 91707-43-6 HCAPLUS

CN 2-Propanone, 1,3-bis(4-aminophenyl)- (9CI) (CA INDEX NAME)



IC C07C117-00; C07C149-32; G03F007-08; G03C001-72
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST bisazide neg working photoimaging compn; photoresist neg working bisazide

IT Phenolic resins, uses and miscellaneous
 Rubber, cyclized
 Rubber, natural, uses and miscellaneous
 (photoresist compns. containing bisazides and, neg.-working)

IT Azides
 (bis-, neg.-working photoresist compns. containing)

IT Rubber, isoprene, uses and miscellaneous
 (cyclized, photoresist compns. containing bisazides and, neg.-working)

IT Photoimaging compositions and processes
 (neg.-working, containing bisazides)

IT Resists
 (photo-, neg.-working, containing bisazides)

IT 9003-31-0D, cyclized
 (of cis-1,4 configuration, photoresist compns. containing bisazides and, neg.-working)

IT 9003-17-2D, cyclized 9010-98-4 9016-83-5 91733-48-1 91733-49-2
 (photoresist compns. containing bisazides and, neg.-working)

IT 91707-38-9
 (photoresist compns. containing butylphenol-cresol-formaldehyde resin and, neg.-working)

IT 91707-31-2 91707-32-3
 (photoresist compns. containing cyclized isoprene rubber and, neg.-working)

IT 91730-18-6
 (photoresist compns. containing cyclized natural rubber and, neg.-working)

IT 91707-39-0 91707-40-3
 (photoresist compns. containing cyclized polybutadiene and, neg.-working)

IT 91707-33-4 91707-34-5 91707-35-6 91707-36-7
 (photoresist compns. containing cyclized polyisoprene and, neg.-working)

IT 91707-37-8
 (photoresist compns. containing formaldehyde-cresol resin and, neg.-working)

IT 38201-77-3 91707-27-6 91707-28-7 91707-29-8 91707-30-1
 91730-17-5
 (photoresist compns. containing partially cyclized polyisoprene and, neg.-working)

IT 91707-41-4
 (photoresist compns. containing polychloroprene and, neg.-working)

IT 91707-42-5
 (photoresist compns. containing tert-butylphenol-cresol-formaldehyde resin and, neg.-working)

IT 6052-10-4P 91707-43-6P
 (preparation and reaction of tetrazotized, with sodium azide)

L26 ANSWER 15 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1984:428104 HCPLUS
 DOCUMENT NUMBER: 101:28104
 TITLE: Bis(2,4-diaminophenyl)alkane oxidative hair dye
 couplers
 INVENTOR(S): Rose, David; Lieske, Edgar
 PATENT ASSIGNEE(S): Henkel K.-G.a.A., Fed. Rep. Ger.
 SOURCE: Ger. Offen., 14 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3235615	A1	19840329	DE 1982-3235615	19820925 ---
US 4629466	A	19861216	US 1983-465666	19830210 ---
EP 107027	A1	19840502	EP 1983-109211	19830917 ---
EP 107027	B1	19851218		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
AT 16978	T	19860115	AT 1983-109211	19830917 ---
JP 59078115	A	19840504	JP 1983-174428	19830922 ---
JP 04010444	B	19920225		

PRIORITY APPLN. INFO.:

DE 1982-3235615

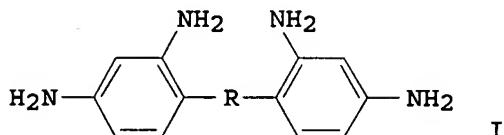
A 19820925

<--

EP 1983-109211

A 19830917

<--

ED Entered STN: 21 Jul 1984
GI

AB I, where R is C3-4 alkylene, especially 1,3-propylene or 1,4-butylene, are couplers for oxidative hair dyes that give blue or green shades that are especially stable to heat, light, and cold waving solns. The dyes contain aromatic or heterocyclic diamines. Thus, 1,3-diphenylpropane [1081-75-0] was nitrated at -5 to -10°, and the resulting 1,3-bis(2',4'-dinitrophenyl)propane [20899-75-6] was hydrogenated with a Pd/C catalyst, acidified with HCl, and 1,3-bis(2',4'-diaminophenyl)propane tetra-HCl [90817-30-4] crystals were isolated by concentration. Oxidative hair dye emulsions containing 0.01 mol each

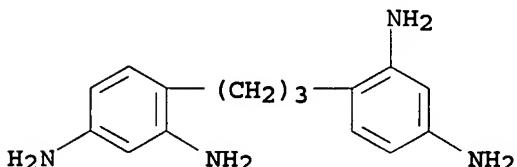
of this coupler and 12 developers were prepared and the colors given to gray hair are tabulated.

IT 90817-30-4P

(preparation of, for oxidative hair dye coupler)

RN 90817-30-4 HCPLUS

CN 1,3-Benzenediamine, 4,4'-(1,3-propanediyl)bis-, tetrahydrochloride (9CI) (CA INDEX NAME)



●4 HCl

IC A61K007-13

CC 62-3 (Essential Oils and Cosmetics)
Section cross-reference(s): 25

IT 90817-30-4P 90817-31-5P

(preparation of, for oxidative hair dye coupler)

L26 ANSWER 16 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1980:408757 HCPLUS

DOCUMENT NUMBER: 93:8757

TITLE: Thermostable heterocyclic polymers

INVENTOR(S): Chernikhov, A. Ya.; Yakovlev, M. N.; Lysova, V. B.; Gefter, E. L.; Shmagina, N. N.

PATENT ASSIGNEE(S): USSR

SOURCE: Ger. Offen., 53 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

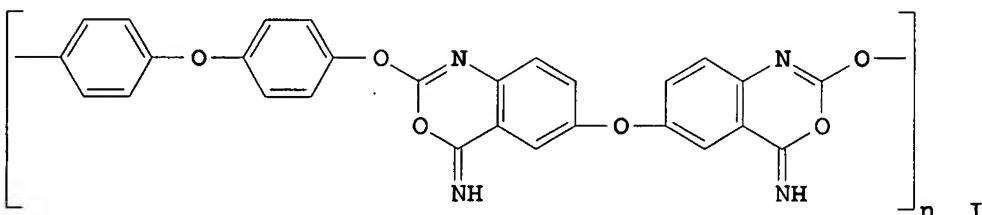
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2825413	A1	19800117	DE 1978-2825413 <--	19780609
US 4229560	A	19801021	US 1978-910298 <--	19780530
JP 56002088	B	19810117	JP 1978-72680 <--	19780615
JP 55000716	A	19800107		
PRIORITY APPLN. INFO.:			DE 1978-2825413 <--	A 19780609

ED Entered STN: 12 May 1984

GI



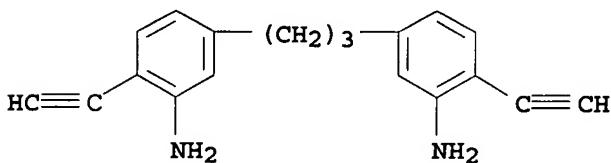
AB Thermostable heterocyclic polymers are prepared by reactions of polysubstituted nitrile or ethynyl compds. with polyfunctional compds. Thus, 3.0 g 3,3'-dicyano-4,4'-diisocyanatodiphenyl ether and 2.0 g 4,4'-dihydroxydiphenyl ether were heated to 200° over 1.5 h and then heated 1 h at 200°, 0.5 h at 250°, and 0.5 h at 300°, giving a 98.5% yield of a brown solid polymer (I) [73539-21-6] which showed 1.8% weight loss after heating 100 h in air at 300°.

IT 73603-44-8DP, polymers with diaminodicyanoethylene and isothiocyanato-terminated isothiocyanic acid polymethylenephylene ester

(manufacture of heat-resistant)

RN 73603-44-8 HCAPLUS

CN Benzenamine, 3,3'-(1,3-propanediyl)bis[6-ethynyl- (9CI) (CA INDEX NAME)]



IC C08G073-06; C08G077-32

CC 35-3 (Synthetic High Polymers)

IT 1187-12-8DP, polymers with bis(aminoethylphenyl)propane and isothiocyanato-terminated isothiocyanic acid polymethylenephylene ester 9016-87-9DP, isothiocyanato-terminated, polymers with diaminodicyanoethylene and bis(aminoethylphenyl)propane
 73417-40-0DP, polymers with oxydicyanophenylene-siloxane copolymers
 73539-21-6P 73539-97-6P 73600-48-3P 73600-51-8P 73600-54-1P
 73600-57-4P 73600-59-6P 73600-61-0P 73600-64-3P 73600-67-6P
 73600-71-2P 73600-74-5P 73600-81-4DP, polymers with (cyanohydroxyphenyl)siloxanes 73603-44-8DP, polymers with diaminodicyanoethylene and isothiocyanato-terminated isothiocyanic acid polymethylenephylene ester 73613-40-8P 73613-44-2P
 73613-48-6P 73614-20-7P 73614-21-8P 73614-56-9P 73614-59-2P
 73614-65-0P 73614-69-4P 73614-72-9P 73614-80-9P 73614-86-5P
 73614-91-2P 73614-95-6P 73614-97-8P 73615-03-9P 73615-11-9P
 73615-13-1P 73615-16-4P 73615-19-7P 73615-21-1P 73629-28-4P
 73629-30-8P 73629-33-1P 73629-36-4P 73629-38-6P 73650-29-0P
 73655-78-4P 73716-72-0P 73716-73-1P 74009-36-2P
 (manufacture of heat-resistant)

L26 ANSWER 17 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1980:216210 HCAPLUS

DOCUMENT NUMBER: 92:216210

TITLE: Thermostable heterocyclic polymers

INVENTOR(S): Chernikhov, A. Ya.; Yakovlev, M. N.; Lysova, V. B.; Gefter, E. L.; Shmagina, N. N.

PATENT ASSIGNEE(S): USSR

SOURCE: Fr. Demande, 45 pp.

CODEN: FRXXBL

DOCUMENT TYPE: Patent

LANGUAGE: French

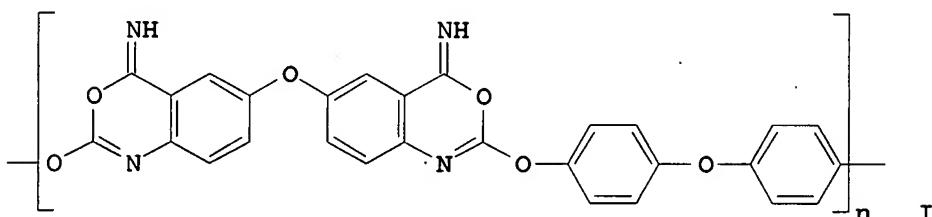
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2428655	A1	19800111	FR 1978-17808	19780614
			<--	
FR 2428655	B1	19810508		
PRIORITY APPLN. INFO.:			FR 1978-17808	A 19780614
			<--	

ED Entered STN: 12 May 1984

GI



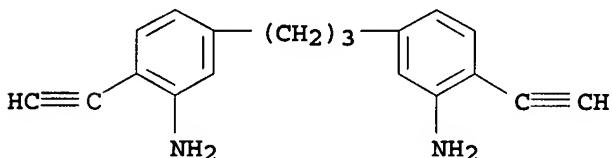
AB Copolymers with good heat resistance are prepared by the copolymn. of ≥1 monomer (and/or oligomer) containing multiple CN and/or C.tplbond.CH groups as well as other functional groups such as NCO,

NCS, NH₂, OH, NSO, or SH groups with ≥ 1 other monomer (and/or oligomer) containing functional groups such as OH, NCO, NH₂, SH, NCS, or NSO groups. The nitrile and/or ethynyl groups are located in the alpha, ortho, or peri position with respect to the other functional groups and cause the formation of heterocyclic rings during polymerization. The polymers contain aromatic rings. Some of the 44 polymers were prepared from decaboranes, silanes, siloxanes, cyclotriphenophosphazenes, phosphates, or halogen-containing compds. Thus, 3.0 g bis(3-cyano-4-isocyanatophenyl) ether and 2 g bis(4-hydroxyphenyl) ether were heated at $\leq 300^\circ$ to prepare 98.5% copolymer I [73539-21-6], which lost 1.8% of its weight during 100 h at 300° in air.

IT 73603-44-8DP, polymer with (diaminomethylene)malononitrile and isothiocyanate-terminated polymethylenepolyphenylene isocyanate (preparation and heat resistance of)

RN 73603-44-8 HCPLUS

CN Benzenamine, 3,3'-(1,3-propanediyl)bis[6-ethynyl- (9CI) (CA INDEX NAME)]



IC C08G073-06; C08G075-32

CC 36-3 (Plastics Manufacture and Processing)

IT 1187-12-8DP, polymer with isothiocyanate-terminated polymethylenepolyphenylene isocyanate and 5,5'-(trimethylene)bis(2-ethynylaniline) 9016-87-9DP, isothiocyanate-terminated, polymer with (diaminomethylene)malononitrile and 5,5'-(trimethylene)bis(2-ethynylaniline) 73539-21-6P 73539-97-6P 73600-51-8P
73600-57-4P 73600-69-8DP, polymer with (perfluorohexamethylene)bis(ethynylisothiocyanatobenzene) and polymeric bis(hydroxybenzonitrile)
73600-70-1DP, polymer with ethynylphenylbenzimidazolediamine and polymeric bis(hydroxybenzonitrile) 73600-74-5P 73600-82-5P
73600-83-6P 73603-44-8DP, polymer with (diaminomethylene)malononitrile and isothiocyanate-terminated polymethylenepolyphenylene isocyanate 73614-21-8P 73614-56-9P
73614-59-2P 73614-65-0P 73614-67-2P 73614-69-4P 73614-72-9P
73614-76-3P 73614-80-9P 73614-81-0P 73614-86-5P 73614-91-2P
73614-95-6P 73614-97-8P 73615-03-9P 73615-11-9P 73615-13-1P
73615-16-4P 73615-19-7P 73615-21-1P 73629-28-4P 73629-30-8P
73629-33-1P 73629-36-4P 73644-16-3P 73650-30-3P 73652-09-2P
(preparation and heat resistance of)

L26 ANSWER 18 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1978:22235 HCPLUS

DOCUMENT NUMBER: 88:22235

TITLE: 1,3-Bis(2-aminocyclohexyl)propanes

INVENTOR(S): Nishihara, Akio; Omi, Jinichi; Tsuchiya, Hiroshi

PATENT ASSIGNEE(S): Asahi Electro-Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

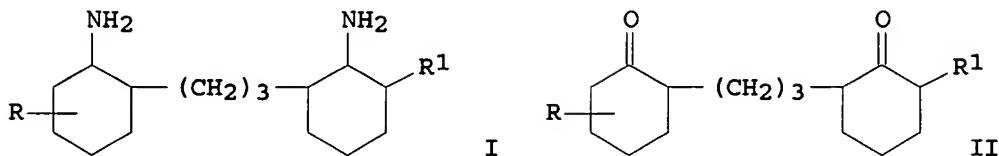
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 52083530	A	19770712	JP 1976-146 --- JP 1976-146	19760101 A 19760101
PRIORITY APPLN. INFO.:			<--	<--
ED	Entered STN:	12 May 1984		
GI				

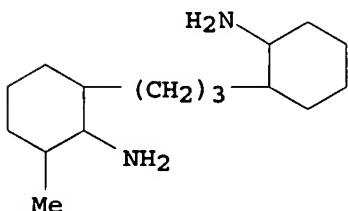


AB Four title amines I ($R = H, Me; R1 = H, Me, Bu$) were prepared by reductive amination of II. Thus, a solution of 0.105 mol II ($R = R1 = H$) and 0.5 mol NH₃ in EtOH was hydrogenated over Ni at 120° to give 98.0% I ($R = R1 = H$), which was converted into its N,N'-diacetyl derivative

IT 64899-84-9P 64943-66-4P 64943-68-6P
 64943-69-7P
 (preparation of)

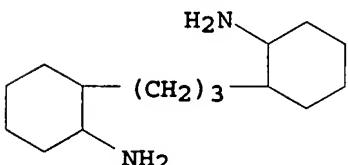
RN 64899-84-9 HCPLUS

CN Cyclohexanamine, 2-[3-(2-amino-3-methylcyclohexyl)propyl]methyl- (9CI)
 (CA INDEX NAME)



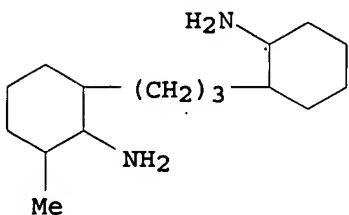
D1—Me

RN 64943-66-4 HCPLUS
CN Cyclohexanamine, 2,2'-(1,3-propanediyl)bis- (9CI) (CA INDEX NAME)



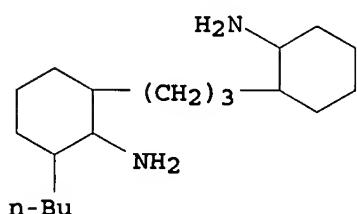
RN 64943-68-6 HCAPLUS

CN Cyclohexanamine, 2-[3-(2-aminocyclohexyl)propyl]-6-methyl- (9CI) (CA
INDEX NAME)



RN 64943-69-7 HCPLUS

CN Cyclohexanamine, 2-[3-(2-aminocyclohexyl)propyl]-6-butyl- (9CI) (CA
INDEX NAME)



IC C07C049-48

CC 24-5 (Alicyclic Compounds)

IT 64899-84-9P 64943-66-4P 64943-67-5P

64943-68-6P 64943-69-7P

(preparation of)

L26 ANSWER 19 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1974:84401 HCPLUS

DOCUMENT NUMBER: 80:84401

TITLE: Heat stable reinforced molded article

INVENTOR(S): Minami, Muneyoshi; Kitamura, Kazuo

PATENT ASSIGNEE(S): Toray Industries, Inc.

SOURCE: Jpn. Tokkyo Koho, 6 pp.

CODEN: JAXXAD

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 48011826	B	19730416	JP 1969-10469	19690214
PRIORITY APPLN. INFO.:			JP 1969-10469	19690214

ED Entered STN: 12 May 1984

AB Heat-resistant polyamide-imide reinforced molding compns. were prepared from 1,2,3,4-butanetetracarboxylic acid [1703-58-8], and aromatic diamine, e.g. phenylenediamine [25265-76-3], diaminodiphenylpropane [2767-73-9], and a polyamine, e.g. triaminodiphenyl ether [51131-47-6], triaminodiphenylmethane [51131-48-7]. The substrate,

e.g. glass fibers, asbestos, was impregnated with the polyamide-imide and molded under pressure at 130-450.deg..

IC B29D; C08G

CC 37-3 (Plastics Fabrication and Uses)

L26 ANSWER 20 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1969:501434 HCAPLUS

DOCUMENT NUMBER: 71:101434

TITLE: Mass spectra and pyrolysis of some aromatic-fluoroaliphatic compounds

AUTHOR(S): Cotter, John L.

CORPORATE SOURCE: Roy. Aircraft Estab., Farnborough, UK

SOURCE: Gt. Brit., Roy. Aircr. Estab., Tech. Rep. (1967), RAE-TR-67251, 14 pp. Avail.: CFSTI From: Sci. Tech. Aerosp. Rep. 1968, 6(12), 1837

CODEN: GBATAU

DOCUMENT TYPE: Report

LANGUAGE: English

ED Entered STN: 12 May 1984

AB The mass spectra of 13 aromatic-fluoroaliphatic compds.

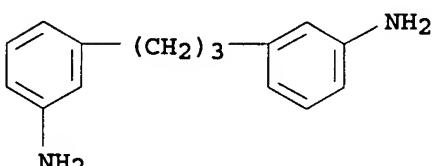
m-RC₆H₄(CH₂)_n-C₆H₄R-m, (R = H, Me, NH₂, I, OCOCl, OMeOH, and OAc for n = 3; and R = H, NH₂, NO₂, and Br for n = 5), perfluoro-1,3-diphenylpropane, and 1,3-di(3-pyridyl)hexafluoropropane are reported. The products of thermal decomposition of 3 of these compds. were examined by mass spectrometry; at 515° the order of thermal stability was C₆F₅(CF₂)₃C₆F₅ < Ph(CF₂)₃Ph < Ph(CF₂)₅Ph.

IT 23916-05-4P

(preparation of)

RN 23916-05-4 HCAPLUS

CN Benzenamine, 3,3'-(1,3-propanediyl)bis- (9CI) (CA INDEX NAME)



CC 25 (Noncondensed Aromatic Compounds)

IT 1081-75-0P 1718-50-9P 23691-35-2P 23916-05-4P

23916-06-5P 23916-07-6P 23916-08-7P 23916-10-1P 23916-11-2P

23916-12-3P 23937-94-2P 24049-30-7P 25078-75-5P

(preparation of)

L26 ANSWER 21 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1969:68105 HCAPLUS

DOCUMENT NUMBER: 70:68105

TITLE: 5,6,7,12-Tetrahydronaphthalen[b,g]azocines and aminoalkylamine derivatives

AUTHOR(S): Fouche, Jean C. L.

CORPORATE SOURCE: Lab. Rech. Pharm., Soc. Usines Chim. RHONE-POULENC, Vitry-sur-Seine, Fr.

SOURCE: Industrie Chimique Belge (1967), 32 (Spec. No.), 226-33

CODEN: ICBEAJ; ISSN: 0019-9052

DOCUMENT TYPE: Journal

LANGUAGE: French

ED Entered STN: 12 May 1984

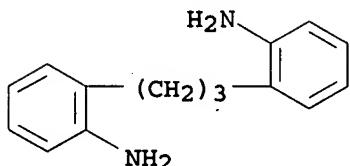
GI For diagram(s), see printed CA Issue.

AB Reduction of 2-O2-NC6H4COCl with KBH4 and LiCl in tetrahydrofuran gave 88.5-95% 2-nitrobenzyl alc., m. 70-2°, which was oxidized with HNO3 initially at 10° with cooling to give 81-9% 2-O2NC6H4CHO (I), m. 39-42°. NaOEt condensation of I with 2-nitroacetophenone yielded 84-8% 2,2'-dinitrochalcone, m. 135-6°, which was reduced with KBH4 to give 73-88.5% 1,3-bis(2-nitrophenyl)-3-propen-1-ol (II), m. 80-90°. Hydrogenation of II over Pt gave 87-91% 1,3-bis-(2-aminophenyl)-1-propanol (III), m. 105-6°; di-N-acetyl derivative m. 228°. 1,3-Bis(2-acetamidophenyl)-1-chloropropane (IV), m. 160-5°, was prepared with SOC12. Hydrogenolysis of 169 g. IV over Pd gave 116.5 g. 1,3-bis(acetamidophenyl)propane (V), m. 262°. V was also prepared in 84% yield by carefully treating III with HC104 in AcOH followed by hydrogenation and acetylation and in 82-5.5% yield from III and HBr followed by hydrogenolysis and acetylation. Hydrolysis of V with HCl in (CH2OH)2 gave 100% 1,3-bis(2-aminophenyl)propane, m. 71-2°; phosphate (VI) m. 226-30°. Heating VI 90 min. at 290-300° gave 42.5% VII m. 58-60°; Ac derivative m. 137-8°. Various VIII were prepared by treating VII with NaH and then chloroamines (method A), with phosgene and a hydroxyamine followed by pyrolysis of the product (method B), with BuLi and a chloroalkyl p-toluenesulfonate followed by treatment of the resulting chloride with an amine (method C), or with BuLi and an ethylene oxide followed by conversion of the resulting alc. through the methanesulfonate to an amine (method D). In one instance using method D, the chain was extended by conversion of the methanesulfonate to the nitrile, reduction, and methylation. VIII prepared were (X, NR'2, method of synthesis, % yield, salt isolated, and m.p. salt listed): (CH2)2, NH2, D, 54, HCl, 193-5°; CH2CHMe, NH2, D, 43, HCl, 215°; (CH2)3, NH2, C, 45, neutral tartrate, 179-81°; CH2CHMe, NHMe, D, 75, HCl, 188-90°; CH2CHMeCH2, NHMe, C, 31, HCl, 201-3°; (CH2)2, NMe2, A, 44 (54), HCl (fumarate), 242-4° (176-8°); CH2CHMe, NMe2, B (D), 25(41), fumarate, 176-8°; (CH2)3, NMe2, A, 49, oxalate, 148-50°; CH2CHMeCH2, NMe2, A (C), 76.5 (41), HCl, 230-2°; (CH2)2, NET2, A, 12.5, HCl, 176-8°; (CH2)3, NET2, C, 66, oxalate, 130-3°; CH2CHMeCH2, NET2, C, 38.5, HCl, 180-3°; CH2CHMe, 1-pyrrolidinyl (Q), D, 31.5, HCl, 200°; (CH2)3, Q, C, 43, neutral tartrate, 128-30°; CH2CHMeCH2, Q, C, 52, HCl, 140° then 210°; (CH2)2, piperidino (T), A, 32.5, HCl, 208-12°; CH2CHMe, T, D, 36, HCl, 182-4°; (CH2)3, T, C, 29, neutral tartrate, 140-2°; CH2CHMeCH2, T, C, 33, HCl, 196-200°; (CH2)2, 4-hydroxypiperidino (U), D, 76.5, neutral tartrate, 194-6°; CH2CHMe, U, D, 67, HCl, 170-5°; (CH2)3, U, C, 61, oxalate, 120-30°; (CH2)3, 4-methylpiperazinyl (V), A, 64, 2 HCl, 198-200°; CH2CHMeCH2, V, C, 46.5, 2 HCl, 198-201°; CH2CHMe, 4-hydroxyethylpiperazino (W), D, 63.5, 2 HCl, 193-7°; (CH2)3, W, C, 68, 2 HCl, 200-2°; CH2CHMeCH2, W, C, 43.5, base, 78.5-81.5°; (CH2)3, 4-hydroxyethoxyethyl-piperazino (Y), C, 71, 2 HCl, 164-6°; CH2CHMeCH2, Y, C, 47.5, base, 78.5-80.5°. Optically active starting materials gave the following VIII (XNR'2 given): Me2NCH2CHMe, [α]2D2 44.7° (EtOH); and Me2NCH2CHMeCH2, [α]2D0 27.2 and -26.9° (CHCl3); and the following 12-substituted VII (12 substituent given): ClCO, (m. 154-6°); Me2NCH2CHMeO2C (m. 122-4°); MeSO3CHMeCH (b0.35 160°); MeCH(CN)CH2 (m. 96°).

IT 21598-82-3P 21598-83-4P
(preparation of)

RN 21598-82-3 HCPLUS

CN Benzenamine, 2,2'-(1,3-propanediyl)bis- (CA INDEX NAME)



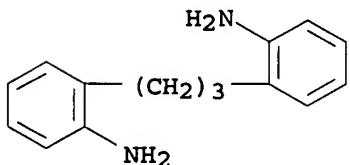
RN 21598-83-4 HCPLUS

CN Aniline, 2,2'-trimethylenedi-, phosphate (2:3) (8CI). (CA INDEX NAME)

CM 1

CRN 21598-82-3

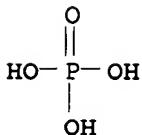
CMF C15 H18 N2



CM 2

CRN 7664-38-2

CMF H3 O4 P



CC 27 (Heterocyclic Compounds (One Hetero Atom))

IT	552-89-6P	612-25-9P	1232-83-3P	1236-63-1P	1236-69-7P
	1239-98-1P	1242-68-8P	1252-05-7P	1428-97-3P	1503-15-7P
	1530-99-0P	1531-01-7P	1531-03-9P	1639-73-2P	21598-81-2P
	21598-82-3P	21598-83-4P	21598-85-6P	21598-87-8P	
	21598-88-9P	21598-89-0P	21598-90-3P	21598-91-4P	21598-92-5P
	21598-95-8P	21598-98-1P	21599-00-8P	21599-01-9P	21599-04-2P
	21599-05-3P	21599-06-4P	21599-07-5P	21599-08-6P	21599-09-7P
	21599-10-0P	21599-13-3P	21599-14-4P	21599-15-5P	21599-16-6P
	21606-39-3P	21606-40-6P	21606-41-7P	21606-42-8P	21681-34-5P
	21688-90-4P	21688-91-5P	21720-48-9P	21749-77-9P	23051-89-0P
	23250-26-2P				

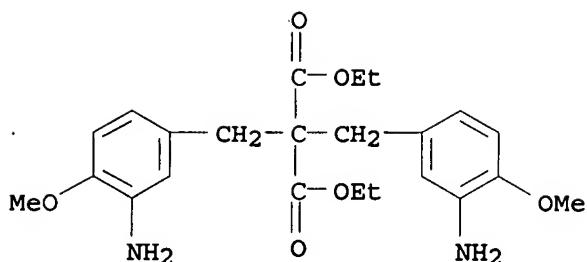
(preparation of)

L26 ANSWER 22 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1966:75577 HCPLUS

DOCUMENT NUMBER: 64:75577

ORIGINAL REFERENCE NO.: 64:14124c-g
 TITLE: Cytoactive alkoxy and hydroxy amino acids. IV.
 Synthesis of α -[3-bis(2-chloroethyl)amino-4-methoxybenzyl]caproic acid
 AUTHOR(S): Straukas, J.; Degutis, J.
 SOURCE: Lietuvos TSR Mokslu Akad. Darbai, Ser. B (1965), (4), 47-53
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 ED Entered STN: 22 Apr 2001
 AB cf. Zh. Obshch. Khim. 36(2), 224-8(1966); CA 60, 10780d. The title compound (I) was prepared by the following sequence. Na condensation of di-Et malonate (II) with BuBr was done in MeOH to give BuCH(CO₂Me)₂ (III), b. 219-21°, ester exchange occurring in the process. 4-Methoxy-3-nitrobenzyl chloride (IV) was added to III to yield di-Me butyl(4-methoxy-3-nitrobenzyl)malonate (V), m. 96-7°. V (10.3 g.) in 50 ml. EtOH was reduced in the presence of 1 g. 5% Pd/CaCO₃ to give 97% di-Me butyl(3-amino-4-methoxybenzyl)malonate (VI). Treatment of 8.3 g. VI with 4.2 ml. ethylene oxide in 50% HOAc for 48 hrs. gave 90.5% di-Me butyl[3-bis(2-hydroxyethyl)amino-4-methoxybenzyl]malonate (VII), m. 80-2°. Refluxing 1 g. VII in 10 ml. CHCl₃ with 1.5 ml. POCl₃ for 1.5 hrs. produced di-Me butyl[3-bis(2-chloroethyl)amino-4-methoxybenzyl] malonate (VIII), m. 35-7°. Hydrolysis and decarboxylation of VIII gave I. Thus, 0.7 g. VIII was dissolved in 2 ml. HOAc and 8 ml. concentrated HCl added to the solution. After 15 hrs. refluxing the solvent was removed in vacuo, the residue dissolved in EtOAc and washed with aqueous NaHCO₃. Evaporation of the EtOAc left I as a colorless oil. Heating VIII with concentrated HCl for 1 hr. gave butyl [3-bis(2-chloroethyl)amino-4-methoxybenzyl] malonic acid, which started to melt at 60°, decomposed >88°. When di-Et malonate was combined first with IV in EtOH, only di-Et bis(4-methoxy-3-nitrobenzyl)malonate (IX), m. 122-3°, was obtained. Reduction of IX yielded di-Et bis(3-amino-4-methoxybenzyl)malonate (X) as an oil [di-HCl salt m. 232-4° (decomposition)]. Acylation of X in hot pyridine with p-toluenesulfonyl chloride gave di-Et bis(4-methoxy-3-tosylaminobenzyl)malonate (XI), m. 159-60°. Di-Et bis[3-(N-2-bromoethyl-N-tosylamino)-4-methoxybenzyl]malonate was prepared by adding 1.48 g. XI to 10 ml. dioxane, adding 1.4 g. K₂CO₃ and then 1 ml. BrCH₂CH₂Br. The mixture was refluxed 18 hrs., filtered, and the filtrate added to 200 ml. cold 5% KOH. The resulting product, purified by precipitating from H₂O-acetone, melted unsharply at 68-78°.
 IT 5292-37-5P, Malonic acid, bis(3-amino-4-methoxybenzyl)-, diethyl ester, dihydrochloride
 (preparation of)
 RN 5292-37-5 HCPLUS
 CN Malonic acid, bis(3-amino-4-methoxybenzyl)-, diethyl ester, dihydrochloride (7CI, 8CI) (CA INDEX NAME)



● 2 HCl

CC 35 (Noncondensed Aromatic Compounds)
 IT 5292-35-3P, Malonic acid, [3-[bis(2-chloroethyl)amino]-4-methoxybenzyl]butyl- 5292-36-4P, Malonic acid, bis(4-methoxy-3-nitrobenzyl)-, diethyl ester 5292-37-5P, Malonic acid, bis(3-amino-4-methoxybenzyl)-, diethyl ester, dihydrochloride 5292-38-6P, Malonic acid, bis(4-methoxy-3-p-toluenesulfonamidobenzyl)-, diethyl ester 5312-05-0P, p-Benzene-dipropionic acid, 2,5-dimethyl- 5312-06-1P, Hydrocinnamic acid, 3-[bis(2-chloroethyl)amino]-α-butyl-4-methoxy- 5312-07-2P, Malonic acid, [3-[bis(2-hydroxyethyl)amino]-4-methoxybenzyl]butyl-, dimethyl ester 5373-95-5P, Malonic acid, (3-amino-4-methoxybenzyl)butyl-, dimethyl ester 5373-96-6P, Malonic acid, [3-[bis(2-chloroethyl)amino]-4-methoxybenzyl]butyl-, dimethyl ester 5570-89-8P, Malonic acid, butyl(4-methoxy-3-nitrobenzyl)-, dimethyl ester 5608-31-1P, Malonic acid, bis[3-[N-(2-bromoethyl)-p-toluenesulfonamido]-4-methoxybenzyl]-, diethyl ester
 (preparation of)

L26 ANSWER 23 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1965:489474 HCPLUS

DOCUMENT NUMBER: 63:89474

ORIGINAL REFERENCE NO.: 63:16503e-f

TITLE: Aromatic polyimide particles from polycyclic diamines

INVENTOR(S): Endrey, Andrew L.

PATENT ASSIGNEE(S): E. I. du Pont de Nemours & Co.

SOURCE: 9 pp.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3179631	-----	19650420	US 1962-169107 <--	19590401

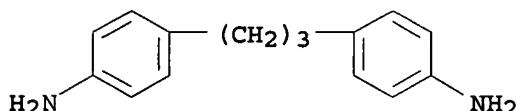
PRIORITY APPLN. INFO.: US 19590401
<--

ED Entered STN: 22 Apr 2001

AB Finely-divided, high-surface-area polyimides are prepared and coalesced at temps. below the crystalline m.p. into solid, homogeneous objects. When the surface area of the polyimide particle exceeds 0.1 m.2/g., a significant improvement in strength is noted. Thus, a polyamide-acid

of $[\eta]$ = 2.36 was prepared from 4.0046 g. of 4,4'-diaminodiphenyl ether and 4.3624 of pyromellitic dianhydride in 75 mL. AcNMe₂. Precipitation and partial conversion to polyimide was effected by adding the above soln. to a solution containing 300 mL. toluene, 60 mL. C5H₅N, 25 mL. Ac₂O, and 0.1 g. LiCl. After filtering and drying, the polymer was suspended in Ac₂O and refluxed overnight. After isolation and heating under N for 16 h., the polyimide powder, which had a surface area of 2-3 m.²/g., could be coalesced to a chip with a strength index of 3.5.

IT 2767-73-9, Aniline, 4,4'-trimethylenedi-
(imide particles from tetracarboxylic acid dianhydrides and)
RN 2767-73-9 HCPLUS
CN Benzenamine, 4,4'-(1,3-propanediyl)bis- (9CI) (CA INDEX NAME)



INCL 260078000
CC 45 (Synthetic High Polymers)
IT 101-80-4, Aniline, 4,4'-oxydi- 101-80-4, Aniline, 4,4'-oxydi-
2420-88-4, Aniline, 4,4'-(methylimino)di- 2479-46-1, Aniline,
4,4'-(m-phenylenedioxy)di- 2767-73-9, Aniline,
4,4'-trimethylenedi-
(imide particles from tetracarboxylic acid dianhydrides and)

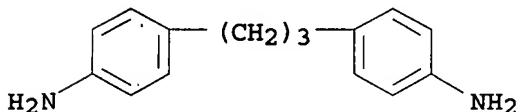
L26 ANSWER 24 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1965:481350 HCPLUS
DOCUMENT NUMBER: 63:81350
ORIGINAL REFERENCE NO.: 63:15057b-c
TITLE: Poly(imino lactones)
PATENT ASSIGNEE(S): E. I. du Pont de Nemours & Co.
SOURCE: 15 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6413549	-----	19640524	NL	-----
BE 656047			BE	<--
US 3271366			US	
PRIORITY APPLN. INFO.:			US	19610307
				<--

ED Entered STN: 22 Apr 2001
AB The preparation of poly(imino lactones) (I) is described. I can be used to make films or filaments and are subject to hydrolysis or can be changed to polyamide esters. The polylactones can also be used as adhesives in laminates, or as coatings in which they can cure in situ. For example, equimolar amts. of pyromellitic anhydride and 4,4-diaminodiphenyl ether are added to 9 parts of AcNMe₂ at 25-40, giving a polyamido acid. Then 30 mL 1M (CF₃CO)₂O in benzene is added to 2.94 g. of the polyamido acid solution in a closed container. The cyclization is very rapid and results in a yellow gel.
IT 2767-73-9, Aniline, 4,4'-trimethylenedi-
(polyamido acids from carboxylic dianhydrides and, and poly(imino

lactones) therefrom)
RN 2767-73-9 HCPLUS
CN Benzenamine, 4,4'-(1,3-propanediyl)bis- (9CI) (CA INDEX NAME)



IC C08G
CC 48 (Plastics Technology)
IT 92-87-5, Benzidine 106-50-3, p-Phenylenediamine 108-45-2,
m-Phenylenediamine 2767-73-9, Aniline, 4,4'-trimethylenedi-
(polyamido acids from carboxylic dianhydrides and, and poly(imino
lactones) therefrom)

L26 ANSWER 25 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1965:439472 HCPLUS

DOCUMENT NUMBER: 63:39472

ORIGINAL REFERENCE NO.: 63:7120a-f

TITLE: Polyurethans. III. The effects of aromatic rings
on the structure and properties of polyurethans
based on ethylene glycol

AUTHOR(S): Lyman, Donald J.; Heller, Jorge; Barlow, Malcolm

CORPORATE SOURCE: Stanford Res. Inst., Menlo Park, CA

SOURCE: Makromolekulare Chemie (1965), 84, 64-79

CODEN: MACEAK; ISSN: 0025-116X

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 22 Apr 2001

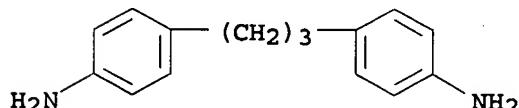
AB cf. CA 56, 14454g. The synthesis and properties of linear aromatic polyurethans based on ethylene glycol and their corresponding aliphatic analogs are described. The preparation of intermediates included ClCO2CH2CH2O2CCl (I), b29 80-2°; CH2(C6H4NCO-4)2 (II), b0.2 148-50°; (4-H2NC6H4CH2)2 (III), purified by sublimation at 0.01 torr and 140°, m. 141-2°; (4-OCNC6H4CH2)2 (IV), m. 92-2.5°, prepared from a solution of III in EtOAc treated with COCl2 in EtOAc; 1,3-diphenylpropane, b2.9 126-8° (V), n25D 1.5575; 1,3-bis(4-nitrophenyl)propane (VI), m. 134-43°; 1,3-bis(4-aminophenyl)propane (VII), m. 103.5-5°; [4-O3NC6H4CH2PPh3]+Br- (VIII), hygroscopic, prepared by refluxing a mixture of p-nitrobenzyl bromide and Ph3P in HCONMe2 and recrystd. from EtOH; p-nitrocinnamaldehyde (IX), yellow needles, m. 137-48°; 1,4-bis(p-nitrophenyl)-1,3-butadiene (X), yellow platelets, m. 269-71°, recrystd. from EtOAc, prepared by treating a solution of VIII and p-nitrocinnamaldehyde with Li in EtOH; (4-H2NC6H4CH2CH2)2 (Xa), m. 88-9°, purified by sublimation at 0.02 torr and 165°, prepared by hydrogenating a solution of X in HCONMe2. The preparation of polyurethans of structure XI, where Y is 1 (XII), 2 (XIII), 3 (XIV), and 4 (XV), is described. For XII, a mixture of 4-methyl-2-pentanone and II is treated with HOCH2CH2OH in Me2SO, and the clear viscous solution is poured onto water. The tough, white polymer precipitate is washed and dried at 90° in vacuo. Clear, tough films are obtained by casting HCONMe2 solns. of the polymer. XIII is prepared by treating an emulsion of III in Na2CO3, H2O, and tetrahydrofuran with I in tetrahydrofuran. XIV is prepared by treating a solution of VII and Na2CO3 in H2O with I in anhydrous CH2Cl2, while XV is prepared by treating a suspension of Xa and Na2CO3 in H2O with I in

CH₂Cl₂. The preparation of (-NH(CH₂)_yNHCO₂-CH₂CH₂O₂C-)n, where γ is 9 (XVI) and 10 (XVII), is described. For XVI, a mixture of 1,9-nonanediamine, Na₂CO₃, and Na lauryl sulfate in H₂O is treated with I in anhydrous C₆H₅. XVII is prepared by treating an emulsion of 1,10-decanediamine, Na₂CO₃, and Na lauryl sulfate in H₂O with I in anhydrous C₆H₆. A polyamide (XVIII) is prepared by treating a solution of 1,9-nonanediamine and NaOH in H₂O with a solution of adipoyl chloride in anhydrous C₆H₆. By using 1,10-decanediamine, nylon 610 (XIX) is prepared in the same way. The inherent viscosities of 0.5% solns. at 30% melting temps., and glass-transition temps, for XII, XIII, XIV, XV, XVI, XVII, XVIII, and XIX are 1.01 (HCONMe₂), 239°, 92.7°; 0.70 (H₂SO₄), 312°, 116.9°; 0.36 (HCONMe₂), 207°, 74.1°; 0.46 (HCONMe₂), 274°, 105.7°; 0.77 (m-cresol), 168°, 44°; and 0.79 (m-cresol), 174°, 60.8°, resp. X-ray diffraction data for XII show that the chain-repeat distance of the aromatic polyurethan, as compared with its aliphatic analog, is drastically shortened from 35.2 to 15.7 Å., and that the chain has a conformation that involves only 1 chemical unit within the fiber repeat distance.

IT 2767-73-9, Aniline, 4,4'-trimethylenedi-, urethan polymers from
 (with ethylene glycol groups)

RN 2767-73-9 HCPLUS

CN Benzenamine, 4,4'-(1,3-propanediyl)bis- (9CI) (CA INDEX NAME)



CC 45 (Synthetic High Polymers)
 IT 646-24-2, 1,9-Nonanediamine, amide polymers and urethan polymers from 2767-73-9, Aniline, 4,4'-trimethylenedi-, urethan polymers from 2767-74-0, Aniline, 4,4'-tetramethylenedi-, urethan polymers from
 (with ethylene glycol groups)

L26 ANSWER 26 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1965:66409 HCPLUS
 DOCUMENT NUMBER: 62:66409
 ORIGINAL REFERENCE NO.: 62:11774f-h,11775a-h,11776a-h,11777a-c
 TITLE: Carboxylic piperazides with chemotherapeutic activity against Dicrocoelium dendriticum
 AUTHOR(S): Schorr, Manfred; Lowee, Heinz; Juergens, Ernst;
 Weber, Helmut; Laemmler, G.
 CORPORATE SOURCE: Farbwerke Hoechst A.-G., Frankfurt-Hoechst,
 Germany
 SOURCE: Arzneimittel-Forschung (1964), 14(10),
 1151-6
 CODEN: ARZNAD; ISSN: 0004-4172
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 ED Entered STN: 22 Apr 2001
 GI For diagram(s), see printed CA Issue.
 AB cf. Hohorst and Graefe, Naturwissenschaften 48, 229(1961). The elucidation of the development of the lancet fluke *D. dendriticum* (loc. cit.) permitted a search for an active chemotherapeutic agent. Several araliphatic carboxylic piperazides were found to be effective

against D. dendriticum. The initial findings motivated the synthesis of apprx. 200 compds. with modified structures, of which 6 types of compds. (I-VI) were of particular interest. Thus, a mixture of 73 g. (4-ClC₆H₄)₃COH, 34 g. NCCH₂CO₂H, 72 g. AcOH, and 14 g. anhydrous ZnCl₂ refluxed and stirred 3 hrs. gave 68 g. (4-Cl-C₆H₄)₃CCH₂CN, m. 170-2°, which (50 g.) heated and stirred 15 hrs. at 150° (bath) with 60 ml. H₂O, 60 ml. concentrated H₂SO₄, and 80 ml. AcOH gave 50 g. (4-ClC₆H₄)₃CCH₂CO₂H (VII), m. 185-6°. X, Y, Z, R, Method, m.p., m.p. HCl salt, m.p. maleate, m.p. corresponding carboxylic acid used; H, H, H, Me, B, --, 253-4°, --, --; 3-Cl, H, H, Me, B, --, --, 190-1°, 115°; 4-Cl, H, H, Me, A, --, 150° (decomposition), --, 183-5°; 4-Cl, 4-Cl, H, Me, A, 166-7°, 250°, --, 180-2°; 4-Cl, 4-Cl, 4-Cl, Me, A, 213-15°, 259-63° (decomposition), --, 185-6°; 4-Cl, 4-Br, 4-Br, Me, B, 216-19°, --, 216° (decomposition), 206-8°; 4-Cl, 4-Cl, 3-F, Me, B, 157-8°, 238-40°, --, --; 4-F, 4-F, H, Me, B, --, 258-60°, --, 162°; 4-Cl, 4-F, 4-F, Me, A, 133-4°, 253-4°, --, 109-10°; 4-Cl, 4-Cl, H, CH₂Ph, B, --, 190-2°, --, 180-2°; 4-Cl, 4-Cl, H, H, D, --, --, 169-70°, --; 4-Cl, H, H, CH₂Ph, B, --, 157° (decomposition), --, 115°; H, H, H, CH₂Ph, B, --, 229-31°, --, --; 4-F, 4-F, H, CH₂Ph, B, --, 193-4°, --, 162°; 4-F, 4-F, H, H, D, --, 250°, --, --; 4-Cl, 4-Cl, 4-Cl, CH₂Ph, B, --, 240-2°, --, 185-6°; 4-Cl, 4-Cl, 4-Cl, H(XIII), D, 167-9°, 94° (contains 4 moles H₂O), --, 185-6°; 4-Cl, 4-Cl, 4-Cl, Et, B, 170°, 230-2°, --, 185-6°; 4-Cl, 4-Cl, 4-Cl, CH₂CH₂OH, B, --, 166° (decomposition), --, 185-6°; 4-Cl, 4-Cl, 4-Cl, iso-Pr, B, --, 240-2°, --, 185-6°; 4-Cl, 4-Cl, 4-Cl, Pr, B, --, 277-80°, --, 185-6°; 4-Cl, 4-Cl, 4-Cl, Bu, B, --, 221-2°, --, 185-6°; 4-Cl, 4-Cl, 4-Cl, iso-Bu, B, --, 281-2°, --, 185-6°; 4-Cl, 4-Cl, 4-Cl, cyclohexyl, B, --, 289-91°, --, 185-6°; 4-Cl, 4-Cl, 4-Cl, CH₂CH₂OMe, A, --, 220-2°, --, 185-6°; 4-Cl, 4-Cl, 4-Cl, CH₂OMe, (from XIII and ClCH₂OMe), --, 159-61° (decomposition), --, 185-6°; 4-Cl, 4-Cl, 4-Cl, CH₂CH₂NET₂, B, --, 188-90° (decomposition), --, 185-6°; 4-Cl, 4-Cl, 4-Cl, (CH₂)₃NMe₂, B, --, 262°, --, 185-6°; 4-Cl, 4-Cl, 4-Cl, CH₂CH₂CN, B, --, 162° (contains 1 mole H₂O), --, 185-6°; 4-Cl, 4-Cl, 4-Cl, CH₂CH₂CO₂Me, B, --, 214-15°, --, 185-6°; 4-Cl, 4-Cl, 4-Cl, COCH₂CH₂CO₂H, (from XIII and succinic anhydride), 106-8° (decomposition), --, --, 185-6°; 4-Cl, 4-Cl, 4-Cl, CO₂Et, B, 151-2°, --, --, 185-6°; 4-Cl, 4-Cl, 4-Cl, piperidinocarbonyl, B, 181-2°, --, --, 185-6°; 4-Cl, 4-Cl, 4-Cl, CSNHCH₂:CH₂, (from XIII and CH₂:CHCH₂NCS), 207-9°, --, --, 185-6°; 4-ClC₆H₄MgBr solution (prepared from 12 g. Mg and 96 g. 4-ClC₆H₄Br in 250 ml. Et₂O) treated with 88.5 g. 4-ClC₆H₄CH:C(CN)CO₂Me in 500 ml. C₆H₆ gave 131 g. crude (4-ClC₆H₄)₂CHCH(CN)CO₂Me, which heated 3 hrs. on a steam bath with 16 g. NaOH in 400 ml. H₂O, the solution filtered, acidified with dilute H₂SO₄, and extracted with Et₂O, the extract evaporated, and the residue heated 15 min. at 170° with 25 ml. quinoline until decarboxylation was complete gave 78 g. (4-ClC₆H₄)₂CHCH₂CN (VIII), b₃ 225-6°. VIII (78 g.) refluxed 18 hrs. with 78 g. KOH in 100 ml. H₂O and 200 ml. EtOH gave 80 g. (4-ClC₆H₄)₂CHCH₂-CO₂H, m. 193-5° (MeOH). 4-ClC₆H₄CHO (70 g.), 85 g. 4-ClC₆H₄CH₂CO₂H, 51 g. Et₃N, and 153 g. Ac₂O heated and stirred 12 hrs. on a steam bath gave 66 g. 4-ClC₆H₄CH:C(C₆H₄Cl-4)CO₂H (IX), m. 158-60°. IX (29 g.) in 250 ml. MeOH hydrogenated over Raney Ni at 60°/100 atmospheric with shaking gave 21 g. 4-ClC₆H₄CH₂CH(C₆H₄Cl-4)CO₂H, m. 125-7°. To

23 g. Na in 375 ml. MeOH was added dropwise 66 g. $\text{CH}_2(\text{CO}_2\text{Me})_2$ and then 166 g. 4-ClC₆H₄CH₂Cl and the mixture refluxed 1 hr. to give 181 g. (4-ClC₆H₄CH₂)₂C(O₂Me)₂ (X), m. 115-16° (MeOH). X, X', Y, Y', method, m.p. HCl salt, m.p. corresponding carboxylic acid; 4-Cl, H, 4-Cl, H, B, 236-8°, 193-5°; 4-Cl, H, 2-Cl, 4-Cl, B, 243-4°, --; 2-Cl, 4-Cl, 3-Cl, 4-Cl, B, 202-3°, --; 4-Cl, H, 4-OMe, H, B, 224-5°, --; X (136 g.) suspended in 1 l. MeOH refluxed 3 hrs. with 43 g. NaOH in 50 ml. H₂O, the resulting solution concentrated in vacuo, the residue dissolved in 500 ml. H₂O, the solution acidified slowly with 100 ml. concentrated HCl (CO₂ was liberated), and heated 1 hr. on a steam bath (to complete decarboxylation) gave 55 g. (4-ClC₆H₄CH₂)₂CHCO₂H (Xa), m. 124-6° (2:1 cyclohexane-ligroine). To a mixture of 127 g. (4-ClC₆H₄)₂CO, 65 g. Me₂C:CCO₂Me, and 500 ml. Me₂SO was added 50 g. solid NaOMe with stirring (the mixture became hot and colored and subsequently solidified) to give 96 g. (4-ClC₆H₄)₂C:CHCMe:CHCO₂H, m. 175° (EtOH). I-VI were prepared by 4 methods. Method A. VII (82 g.) covered with 250 ml. SOCl₂, kept 15 min. at room temperature, and refluxed 1 hr. gave 71 g. acid chloride (XI) containing 1 mole C₆H₆ of crystallization, m. 106-8°, which heated several hrs. in vacuo (0.5 mm.) at 90° gave XI, m. 135-7°.

XI-C₆H₆ (50.2 g.) in 90 ml. Me₂CO treated dropwise with 10 g. N-methylpiperazine (XII) in 30 cc. Me₂CO with stirring (the temperature rose to approx. 50°) and the mixture stirred 1 hr. gave 44.8 g. I (X = Y = Z = 4-Cl, R = Me) HCl salt (XIIa.HCl), decomposed 259-63°.

Method B. Xa (30.9 g.) covered with 15 ml. C₆H₆, 26.2 g. SOCl₂, and 0.5 ml. HCONMe₂, the mixture kept 30 min. (gas evolution accompanied by dissoln. occurred), the solution heated a short time at 40° and evaporated in vacuo, the residual oily acid chloride dissolved in 40 ml. Me₂CO, 10.6 g. XII added dropwise, and the mixture stirred 1 hr. and evaporated in vacuo gave 33 g. V (X = Y = 4-Cl, X' = Y' = H, R = Me), m. 75-7°. Method C. To a mixture of 14.6 g. (4-MeC₆H₄)₂C:CHCMe:CHCO₂H, 200 ml. dioxane, and 5 g. Et₃N was added 5.4 g. ClCO₂Et at -10 to 0° with stirring, the mixture stirred 10 min., treated dropwise with 5 g. XII in 20 ml. dioxane with cooling and stirring, and stirred 1 hr. at 0° and 3 hrs. at room temperature to give 8 g. VI (X = Y = 4-Me, X' = Y' = H, R = Me), m. 127°.

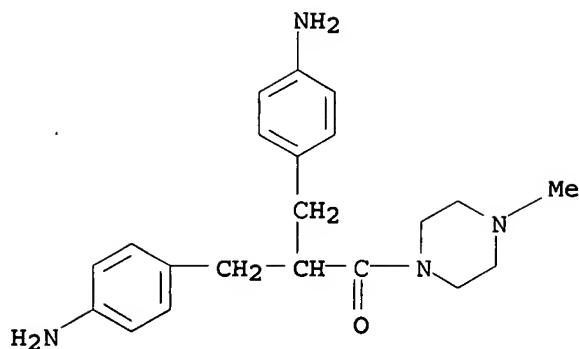
I (X = Y = Z = 4-Cl, R = CH₂Ph) HCl salt (30 g.) in 250 ml. iso-PrOH hydrogenated over Pd-C at 50° until the calculated amount H was absorbed (several hrs.) gave I (X = Y = Z = 4-Cl, R = H), m. 167-9° (EtOAc-ligroine). The I listed in the first table were thus prepared. The II listed in the 2nd table were also prepared. The III listed in the 3rd table were prepared X, X', Y, Y', R, method, m.p., m.p. HCl salt, m.p. corresponding carboxylic acid; 4-Cl, H, 4-Cl, H, Me, A, 124-5°, 238-40°, 158-60°; 3-Cl, 4-Cl, 4-Cl, H, Me, A, --, 166-8°, 150-3°; 3-Cl, 4-Cl, 3-Cl, 4-Cl, H, Me, A, --, 241-3°, 164-7°; 2-Cl, 4-Cl, 4-Cl, H, Me, A, 160-2°, 188-90° (decomposition), 157-60°; 4-Me, H, 4-Cl, H, Me, A, --, 198-9°, 208-10°; 4-OMe, H, 4-Cl, H, Me, A, --, 196-8°, 219-21°; 4-Cl, H, 4-Cl, H, CH₂Ph, A, --, 246-8°, 158-60°; 4-Cl, H, 4-Cl, H, iso-Pr, B, 208-10° (maleate), --, 158-60°; 4-Cl, H, 4-Cl, H, CH₂CH₂NET₂, B, --, 244-7° (decomposition), 158-60°; X, X', Y, Y', R', method, m.p., m.p. HCl salt, m.p. maleate, m.p. corresponding carboxylic acid; 4-Cl, H, 4-Cl, H, H, B, 134°, --, 173-5°, 125-7°; 3-Cl, 4-Cl, 4-Cl, H, H, B, 134-7°, --, 143-5°, 139-42°; 3-Cl, 4-Cl, 3-Cl, 4-Cl, H, A, 141-2°, 251-2°, --, 149-51°; 4-Cl, H, 4-Cl, H, Et, B, 136-9°, --, 201-3°, 170-2°; 4-Me, H, 4-Cl, H, H, B, 146-7°, 170-2°, --, 123-5°; 4-OMe, H, 4-Cl, H, H, B, --, 185-6°, --, 119-21°; X, X',

Y, Y', R, method, m.p., m.p. HCl salt, m.p. maleate, m.p. corresponding carboxylic acid; 4-Cl, H, 4-Cl, H, Me, B, 75-7°, --, 140-1°, 124-6°; 3-Cl, 4-Cl, 3-Cl, 4-Cl, Me, A, 114-16°, 186-7°, --, 117°; 2-Cl, 4-Cl, 2-Cl, 4-Cl, Me, A, 111-13°, 212-14°, --, 155-7°; 4-Cl, H, 4-Cl, H, CH₂Ph, B, 116-18°, 187-9°, --, 124-6°; 4-Cl, H, 4-Cl, H, H, D, --, --; 144-5°, --; 4-NO₂, H, 4-NO₂, H, Me (XIV), A, 126-7°, 200-1°, --, 184-5°; 2-NO₂, H, 2-NO₂, H, Me, A, 113-14°, 180-2°, --, 149°; 4-NH₂, H, 4-NO₂, H, Me, (by reduction of XIV), --, 259-60°, --, --; X, X', Y, R, method, m.p., m.p. HCl salt, m.p. corresponding carboxylic acid ; 4-Cl, H, 4-Cl, Me, B, 165°, 228°, 175°; 3-Cl, 4-Cl, H, Me, B, 106°, 193°, 179°; 3-Cl, 4-Cl, 4-Cl, Me, B, 128-30°, 216° (decomposition), 181° (decomposition); 3-Cl, 5-Cl, 4-Cl, Me, B, 96°, 196°, 181°; 4-Cl, H, 4-Br, Me, B, 154°, 236°, 190°; 4-Br, H, 4-Br, Me, B, 152°, 228°, 192°; 2-Cl, H, 4-Cl, Me, B, 137°, 223°, 138°; 2-Cl, 4-Cl, 4-Cl, Me, B, --, 208°, 147°; 4-Me, H, 4-Cl, Me, B, 143°, 202°, 201°; 4-Me, H, 4-Me, Me, C, 127°, 206°, 206°; 4-OMe, H, 4-OMe, Me, C, --, 196-7°, 178° (decomposition); 4-ClC₆H₄, H, 4-Cl, Me, C, --, 210°, 163°; 4-Me, H, 2-Me, Me, C, --, 218°, 198°; 4-Cl, H, 2-Me, Me, B, 115°, 231°, 139°; 4-ClC₆H₄, H, 4-Cl, Me, B, --, 230°, 197°; 2-Cl, 5-Me, 4-Cl, Me, B, 204°, 170°; 2-Cl, 5-Me, 4-Me, Me, B, --, 200°, 177°; 3-Cl, 5-Me, 4-Me, Me, C, --, 215°, 188°; 3-Cl, 5-Me, 4-Cl, Me, C, --, 222°, 164°; 4-Cl, H, H, Me, C, --, 206°, 147°; 4-Cl, H, 4-OMe, Me, C, 126°, C, --, 206°, 174°; 2-Cl, H, 4-OMe, Me, C, 126°, 165°, 145°; 4-Me, H, 4-OMe, Me, C, --, 192°, 189°; 4-Cl, H, 4-F, Me, C, 138°, 216°, 189°; 3-Me, 4-Cl, 4-Cl, Me, C, --, 224°, 171°; 4-Cl, H, 4-Cl, Et, B, --, 236°, 175°; 4-Cl, H, 4-Cl, Pr, B, --, 211°, 175°; 4-Cl, H, 4-Cl, CH₂Ph, B, --, 228°, 175°; 4-Cl, H, 4-Cl, CH₂CH₂OH, B, --, 187°, 175°; 4-Cl, H, 4-Cl, CH₂CH₂OMe, B, --, 185°, 175°; 4-Cl, H, 4-Cl, CH₂CH₂NET₂, B, --, 222°, 175°; The IV listed in the 4th table were prepared The V listed in the 5th table were prepared The VI listed in the 6th table were prepared The relation between structure and activity is briefly discussed. Because of its remarkable properties, XIIa.HCl (Hetolin) will be the 1st specific preparation against D. dendriticum to be introduced into the veterinary armamentarium.

IT 3921-49-1P, Piperazine, 1-[p-amino- α -(p-aminobenzyl)hydrocinnamoyl]-4-methyl-, hydrochloride
(preparation of)

RN 3921-49-1 HCPLUS

CN Piperazine, 1-[p-amino- α -(p-aminobenzyl)hydrocinnamoyl]-4-methyl-, hydrochloride (7CI, 8CI) (CA INDEX NAME)



● HCl

CC 37 (Heterocyclic Compounds (One Hetero Atom))
IT 1610-59-9P, Hydrocinnamic acid, o-nitro- α -(o-nitrobenzyl)-
1610-60-2P, Piperazine, 1-methyl-4-[o-nitro- α -(o-nitrobenzyl)hydrocinnamoyl]- 1610-61-3P, Hydrocinnamic acid, p-nitro- α -(p-nitrobenzyl)- 1610-62-4P, Piperazine, 1-methyl-4-[p-nitro- α -(p-nitrobenzyl)hydrocinnamoyl]-
1610-63-5P, Piperazine, 1-benzyl-4-[p-chloro- α -(p-chlorobenzyl)hydrocinnamoyl]- 1610-64-6P, Hydrocinnamic acid, 2,4-dichloro- α -(2,4-dichlorobenzyl)- 1610-65-7P, Piperazine, 1-[2,4-dichloro- α -(2,4-dichlorobenzyl)hydrocinnamoyl]-4-methyl-
1610-66-8P, Hydrocinnamic acid, 3,4-dichloro- α -(3,4-dichlorobenzyl)- 1610-67-9P, Piperazine, 1-[3,4-dichloro- α -(3,4-dichlorobenzyl)hydrocinnamoyl]-4-methyl- 1610-68-0P, Hydrocinnamic acid, p-chloro- α -(p-chlorobenzyl)- 1610-69-1P, Piperazine, 1-[p-chloro- α -(p-chlorobenzyl)hydrocinnamoyl]-4-methyl- 1610-70-4P, Propionic acid, 2-(p-chlorophenyl)-3-(p-methoxyphenyl)- 1610-71-5P, Propionic acid, 2-(p-chlorophenyl)-3-p-tolyl- 1610-72-6P, Piperazine, 1-[2-(p-chlorophenyl)-3-p-tolylpropionyl]-4-methyl- 1610-73-7P, Piperazine, 1-[2,3-bis(p-chlorophenyl)valeryl]-4-methyl- 1610-74-8P, Propionic acid, 2,3-bis(3,4-dichlorophenyl)- 1610-75-9P, Piperazine, 1-[2,3-bis(3,4-dichlorophenyl)propionyl]-4-methyl- 1610-76-0P, Propionic acid, 2-(p-chlorophenyl)-3-(3,4-dichlorophenyl)-
1610-77-1P, Piperazine, 1-[2-(p-chlorophenyl)-3-(3,4-dichlorophenyl)propionyl]-4-methyl- 1610-78-2P, Piperazine, 1-[2,3-bis(p-chlorophenyl)propionyl]-4-methyl- 1743-53-9P, Valeric acid, 2,3-bis(p-chlorophenyl)- 1743-54-0P, Propionic acid, 2,3-bis(p-chlorophenyl)- 1815-57-2P, Piperazine, 1-[5-(p-chlorophenyl)-5-(p-fluorophenyl)-3-methyl-2,4-pentadienoyl]-4-methyl- 1933-60-4P, Piperazine, 1-benzyl-4-(m-chloro- β , β -diphenylhydrocinnamoyl)-, hydrochloride 1947-44-0P, Piperazine, 1-[2,4-dichloro- β -(p-chlorophenyl)hydrocinnamoyl]-4-methyl-, hydrochloride 1947-45-1P, Piperazine, 1-benzyl-4-(3,3,3-triphenylpropionyl)-, hydrochloride 1949-03-7P, Piperazine, 1-[5-(p-chlorophenyl)-3-methyl-5-phenyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 1949-04-8P, Piperazine, 1-[5-(p-chlorophenyl)-5-(6-chloro-m-tolyl)-3-methyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 1949-05-9P, Piperazine, 1-methyl-4-(3-methyl-5-o-tolyl-5-p-tolyl-2,4-pentadienoyl)-, hydrochloride 1949-06-0P, Piperazine, 1-[β , β -bis(p-bromophenyl)-p-chlorohydrocinnamoyl]-4-methyl-,

maleate 1949-07-1P, Piperazine, 1-methyl-4-[3,3,3-tris(p-chlorophenyl)propionyl]-, hydrochloride 1949-94-6P,
 1-Piperazineethanol, 4-[5,5-bis(p-chlorophenyl)-3-methyl-2,4-pentadienoyl]-, hydrochloride 1949-95-7P, Piperazine,
 1-benzyl-4-[5,5-bis(p-chlorophenyl)-3-methyl-2,4-pentadienoyl]-, hydrochloride 1949-96-8P, Piperazine, 1-[5-(p-chlorophenyl)-5-(4-chloro-m-tolyl)-3-methyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 1949-97-9P, Piperazine, 1-[5-(p-chlorophenyl)-5-(p-fluorophenyl)-3-methyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 1949-98-0P, Piperazine, 1-[5-(o-chlorophenyl)-5-(p-methoxyphenyl)-3-methyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 1949-99-1P, Piperazine, 1-[5-(p-chlorophenyl)-3-methyl-5-p-tolyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 1950-00-1P, Piperazine, 1-[2,3-bis(p-chlorophenyl)acryloyl]-4-isopropyl-, maleate 1950-01-2P, Piperazine, 1-benzyl-4-[2,3-bis(p-chlorophenyl)acryloyl]-, hydrochloride 1950-02-3P, Piperazine, 1-[2-(p-chlorophenyl)-3-(2,4-dichlorophenyl)acryloyl]-4-methyl-, hydrochloride 1957-36-4P, Piperazine, 1-[p-chloro- β , β -bis(p-fluorophenyl)hydrocinnamoyl]-4-methyl-, hydrochloride 1961-21-3P, Piperazine, 1-benzyl-4-[β , β -bis(p-fluorophenyl)hydrocinnamoyl]-, hydrochloride 1996-05-0P, Propionic acid, 3-(p-chlorophenyl)-3,3-bis(p-fluorophenyl)- 1996-11-8P, Propionic acid, 3,3-bis(p-fluorophenyl)-3-phenyl- 2023-42-9P, 2,4-Pentadienoic acid, 5-(p-chlorophenyl)-5-(p-fluorophenyl)-3-methyl- 2090-41-7P, Piperazine, 1-[5-(o-chlorophenyl)-5-(p-chlorophenyl)-3-methyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 2090-42-8P, Piperazine, 1-[5,5-bis(p-bromophenyl)-3-methyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 2090-43-9P, Piperazine, 1-[5-(p-chlorophenyl)-5-(3,5-dichlorophenyl)-3-methyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 2090-44-0P, Piperazine, 1-[5-(p-chlorophenyl)-5-(3,4-dichlorophenyl)-3-methyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 2090-45-1P, Piperazine, 1-[5-(3,4-dichlorophenyl)-3-methyl-5-phenyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 2166-72-5P, 2,4-Pentadienoic acid, 5-(o-chlorophenyl)-5-(p-chlorophenyl)-3-methyl- 2166-73-6P, Piperazine, 1-[5-(o-chlorophenyl)-5-(p-chlorophenyl)-3-methyl-2,4-pentadienoyl]-4-methyl- 2166-74-7P, 2,4-Pentadienoic acid, 5,5-bis(p-bromophenyl)-3-methyl- 2166-75-8P, Piperazine, 1-[5,5-bis(p-bromophenyl)-3-methyl-2,4-pentadienoyl]-4-methyl- 2166-76-9P, 2,4-Pentadienoic acid, 5-(p-bromophenyl)-5-(p-chlorophenyl)-3-methyl- 2166-77-0P, Piperazine, 1-[5-(p-bromophenyl)-5-(p-chlorophenyl)-3-methyl-2,4-pentadienoyl]-4-methyl- 2166-78-1P, 2,4-Pentadienoic acid, 5-(p-chlorophenyl)-5-(3,5-dichlorophenyl)-3-methyl- 2166-79-2P, Piperazine, 1-[5-(p-chlorophenyl)-5-(3,5-dichlorophenyl)-3-methyl-2,4-pentadienoyl]-4-methyl- 2166-80-5P, 2,4-Pentadienoic acid, 5-(p-chlorophenyl)-5-(3,4-dichlorophenyl)-3-methyl- 2166-81-6P, Piperazine, 1-[5-(p-chlorophenyl)-5-(3,4-dichlorophenyl)-3-methyl-2,4-pentadienoyl]-4-methyl- 2166-83-8P, Piperazine, 1-[5-(3,4-dichlorophenyl)-3-methyl-5-phenyl-2,4-pentadienoyl]-4-methyl- 2166-84-9P, 2,4-Pentadienoic acid, 5,5-bis(p-chlorophenyl)-3-methyl- 2166-85-0P, Piperazine, 1-[2-(p-chlorophenyl)-3-(2,4-dichlorophenyl)acryloyl]-4-methyl- 2166-86-1P, Acrylic acid, 2,3-bis(3,4-dichlorophenyl)- 2167-94-4P, Acrylic acid, 2-(p-chlorophenyl)-3-(3,4-dichlorophenyl)- 2167-97-7P, 1-Piperazinecarboxamide, N-allylthio-4-[3,3,3-tris(p-chlorophenyl)propionyl]- 2167-98-8P, Piperazine, 1-(piperidinocarbonyl)-4-[3,3,3-tris(p-chlorophenyl)propionyl]- 2167-99-9P, 1-Piperazinecarboxylic acid, 4-[3,3,3-tris(p-chlorophenyl)propionyl]-, ethyl ester 2168-00-5P, Piperazine, 1-ethyl-4-[3,3,3-tris(p-chlorophenyl)propionyl]- 2168-01-6P, Piperazine, 1-benzyl-4-[β , β -bis(p-

chlorophenyl)hydrocinnamoyl] - 2168-04-9P, Piperazine,
 1-[β,β -bis(p-chlorophenyl)-p-fluorohydrocinnamoyl]-4-methyl-
 2168-05-0P, Propionic acid, 3,3-bis(p-bromophenyl)-3-(p-chlorophenyl)-
 2168-06-1P, Propionic acid, 3,3,3-tris(p-chlorophenyl) - 2168-07-2P,
 Propionic acid, 3,3-bis(p-chlorophenyl)-3-phenyl - 2168-08-3P,
 Piperazine, 1-[β,β -bis(p-chlorophenyl)hydrocinnamoyl]-4-
 methyl - 2168-09-4P, Propionic acid, 3-(p-chlorophenyl)-3,3-diphenyl-
 2168-10-7P, Propionic acid, 3-(m-chlorophenyl)-3,3-diphenyl-
 2168-53-8P, Piperazine, 1-[5,5-bis(p-chlorophenyl)-3-methyl-2,4-
 pentadienoyl]-4-(2-methoxyethyl)-, hydrochloride 2168-54-9P,
 Piperazine, 1-[5,5-bis(p-chlorophenyl)-3-methyl-2,4-pentadienoyl]-4-
 propyl-, hydrochloride 2168-55-0P, Piperazine, 1-methyl-4-(3-methyl-
 5,5-di-p-tolyl-2,4-pentadienoyl)-, hydrochloride 2168-56-1P,
 Piperazine, 1-[5-(p-chlorophenyl)-5-(2,4-dichlorophenyl)-3-methyl-2,4-
 pentadienoyl]-4-methyl-, hydrochloride 2168-57-2P, Piperazine,
 1-[2-(p-chlorophenyl)-3-p-tolylacryloyl]-4-methyl-, hydrochloride
 2172-48-7P, Malonic acid, bis(p-chlorobenzyl)-, dimethyl ester
 2172-49-8P, Propionyl chloride, 3,3,3-tris(p-chlorophenyl)-
 2172-50-1P, Propionitrile, 3,3-bis(p-chlorophenyl) - 2172-51-2P,
 Propionitrile, 3,3,3-tris(p-chlorophenyl) - 2172-52-3P,
 2,4-Pentadienoic acid, 5-(p-chlorophenyl)-5-(4-chloro-m-tolyl)-3-
 methyl - 2172-54-5P, 2,4-Pentadienoic acid, 5-(p-methoxyphenyl)-3-
 methyl-5-p-tolyl - 2172-55-6P, 2,4-Pentadienoic acid,
 5-(o-chlorophenyl)-5-(p-methoxyphenyl)-3-methyl - 2172-56-7P,
 Piperazine, 1-[5-(o-chlorophenyl)-5-(p-methoxyphenyl)-3-methyl-2,4-
 pentadienoyl]-4-methyl - 2172-57-8P, 2,4-Pentadienoic acid,
 5-(p-chlorophenyl)-5-(p-methoxyphenyl)-3-methyl - 2172-58-9P,
 2,4-Pentadienoic acid, 5-(p-chlorophenyl)-3-methyl-5-phenyl-
 2172-59-0P, 2,4-Pentadienoic acid, 5-(p-chlorophenyl)-5-(5-chloro-m-
 toyl)-3-methyl - 2172-60-3P, 2,4-Pentadienoic acid,
 5-(5-chloro-m-tolyl)-3-methyl-5-p-tolyl - 2172-61-4P,
 2,4-Pentadienoic acid, 5-(6-chloro-m-tolyl)-3-methyl-5-p-tolyl-
 2172-62-5P, 2,4-Pentadienoic acid, 5-(p-chlorophenyl)-5-(6-chloro-m-
 toyl)-3-methyl - 2172-63-6P, 2,4-Pentadienoic acid,
 5-(4'-chloro-4-biphenylyl)-5-(p-chlorophenyl)-3-methyl - 2172-64-7P,
 2,4-Pentadienoic acid, 3-methyl-5-o-tolyl-5-p-tolyl - 2172-65-8P,
 2,4-Pentadienoic acid, 5-[p-(p-chlorophenoxy)phenyl]-5-(p-
 chlorophenyl)-3-methyl - 2172-66-9P, 2,4-Pentadienoic acid,
 3-methyl-5,5-di-p-tolyl - 2172-67-0P, Piperazine,
 1-methyl-4-(3-methyl-5,5-di-p-tolyl-2,4-pentadienoyl) - 2172-68-1P,
 2,4-Pentadienoic acid, 5-(p-chlorophenyl)-3-methyl-5-p-tolyl-
 2172-69-2P, Piperazine, 1-[5-(p-chlorophenyl)-3-methyl-5-p-tolyl-2,4-
 pentadienoyl]-4-methyl - 2172-70-5P, 2,4-Pentadienoic acid,
 5-(p-chlorophenyl)-5-(2,4-dichlorophenyl)-3-methyl - 2177-73-3P,
 Piperazine, 1-[5,5-bis(p-chlorophenyl)-3-methyl-2,4-pentadienoyl]-4-
 methyl - 2177-74-4P, Acrylic acid, 2-(p-chlorophenyl)-3-(p-
 methoxyphenyl) - 2177-75-5P, Acrylic acid, 2-(p-chlorophenyl)-3-p-
 tolyl - 2177-76-6P, Acrylic acid, 2-(p-chlorophenyl)-3-(2,4-
 dichlorophenyl) - 2274-52-4P, Piperazine, 1-[5,5-bis(p-methoxyphenyl)-
 3-methyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 2274-53-5P,
 Piperazine, 1-[β,β -bis(p-chlorophenyl)-p-
 fluorohydrocinnamoyl]-4-methyl-, hydrochloride 2390-20-7P,
 1-Piperazinebutyric acid, γ -oxo-4-[3,3,3-tris(p-
 chlorophenyl)propionyl] - 2390-21-8P, Piperazine,
 1-[β,β -bis(p-bromophenyl)-p-chlorohydrocinnamoyl]-4-methyl-
 2390-22-9P, Piperazine, 1-methyl-4-[3,3,3-tris(p-
 chlorophenyl)propionyl] - 2390-71-8P, Piperazine,
 1-[5-(5-chloro-m-tolyl)-3-methyl-5-p-tolyl-2,4-pentadienoyl]-4-methyl-
 , hydrochloride 2390-72-9P, Piperazine, 1-[5-[p-(p-
 chlorophenoxy)phenyl]-5-(p-chlorophenyl)-3-methyl-2,4-pentadienoyl]-4-

methyl-, hydrochloride 2394-52-7P, Piperazine, 1-[5,5-bis(p-chlorophenyl)-3-methyl-2,4-pentadienoyl]-4-[2-(diethylamino)ethyl]-, hydrochloride 2394-53-8P, Piperazine, 1-[5,5-bis(p-chlorophenyl)-3-methyl-2,4-pentadienoyl]-4-ethyl-, hydrochloride 2394-55-0P, Piperazine, 1-[2-(p-chlorophenyl)-3-(p-methoxyphenyl)acryloyl]-4-methyl-, hydrochloride 2459-67-8P, Piperazine, 1-[5,5-bis(p-chlorophenyl)-3-methyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 2459-68-9P, Piperazine, 1-[2,3-bis(3,4-dichlorophenyl)acryloyl]-4-methyl-, hydrochloride 2459-69-0P, Piperazine, 1-[2-(p-chlorophenyl)-3-(3,4-dichlorophenyl)acryloyl]-4-methyl-, hydrochloride 2459-70-3P, Piperazine, 1-[3,3-bis(p-chlorophenyl)propionyl]-4-methyl-, hydrochloride 2459-71-4P, 1-Piperazinepropionic acid, 4-[3,3,3-tris(p-chlorophenyl)propionyl]-, methyl ester, hydrochloride 2459-72-5P, Piperazine, 1-[3-(dimethylamino)propyl]-4-[3,3,3-tris(p-chlorophenyl)propionyl]-, hydrochloride 2459-73-6P, Piperazine, 1-[2-(diethylamino)ethyl]-4-[3,3,3-tris(p-chlorophenyl)propionyl]-, hydrochloride 2459-74-7P, Piperazine, 1-(methoxymethyl)-4-[3,3,3-tris(p-chlorophenyl)propionyl]-, hydrochloride 2459-75-8P, Piperazine, 1-(2-methoxyethyl)-4-[3,3,3-tris(p-chlorophenyl)propionyl]-, hydrochloride 2459-76-9P, Piperazine, 1-butyl-4-[3,3,3-tris(p-chlorophenyl)propionyl]-, hydrochloride 2459-77-0P, Piperazine, 1-propyl-4-[3,3,3-tris(p-chlorophenyl)propionyl]-, hydrochloride 2459-78-1P, 1-Piperazineethanol, 4-[3,3,3-tris(p-chlorophenyl)propionyl]-, hydrochloride 2459-79-2P, Piperazine, 1-benzyl-4-[3,3,3-tris(p-chlorophenyl)propionyl]-, hydrochloride 2459-80-5P, Piperazine, 1-[β , β -bis(p-chlorophenyl)hydrocinnamoyl]-, maleate 2459-81-6P, Piperazine, 1-(m-chloro- β , β -diphenylhydrocinnamoyl)-4-methyl-, maleate 2540-35-4P, Propionic acid, 3,3-bis(p-chlorophenyl)- 2586-16-5P, Piperazine, 1-[β , β -bis(p-fluorophenyl)hydrocinnamoyl]-, hydrochloride 2611-73-6P, Piperazine, 1-[5-(p-methoxyphenyl)-3-methyl-5-p-tolyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 2636-34-2P, Piperazine, 1-[5-(p-chlorophenyl)-5-(5-chloro-m-tolyl)-3-methyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 2636-35-3P, Piperazine, 1-[5-(6-chloro-m-tolyl)-3-methyl-5-p-tolyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 2636-36-4P, Piperazine, 1-[5-(4'-chloro-4-biphenylyl)-5-(p-chlorophenyl)-3-methyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 2636-37-5P, Piperazine, 1-[5-(p-chlorophenyl)-3-methyl-5-o-tolyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 2672-35-7P, Piperazine, 1-isopropyl-4-[3,3,3-tris(p-chlorophenyl)propionyl]-, hydrochloride 2672-36-8P, Piperazine, 1-ethyl-4-[3,3,3-tris(p-chlorophenyl)propionyl]-, hydrochloride 2779-83-1P, Piperazine, 1-[p-chloro- β -(p-methoxyphenyl)hydrocinnamoyl]-4-methyl-, hydrochloride 2779-84-2P, Piperazine, 1-[2,4-dichloro- β -(3,4-dichlorophenyl)hydrocinnamoyl]-4-methyl-, hydrochloride 2780-77-0P, Piperazine, 1-[3,3,3-tris(p-chlorophenyl)propionyl]- 2881-91-6P, Piperazine, 1-[5-(p-chlorophenyl)-5-(p-methoxyphenyl)-3-methyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 2897-99-6P, 1-Piperazinepropionitrile, 4-[3,3,3-tris(p-chlorophenyl)propionyl]-, hydrochloride 2949-31-7P, 2,4-Pentadienoic acid, 5-(p-chlorophenyl)-3-methyl-5-o-tolyl-2949-32-8P, Piperazine, 1-[5-(p-chlorophenyl)-3-methyl-5-o-tolyl-2,4-pentadienoyl]-4-methyl- 2950-05-2P, Piperazine, 1-[3,3,3-tris(p-chlorophenyl)propionyl]-, hydrochloride 2950-07-4P, Piperazine, 1-[β , β -bis(p-chlorophenyl)hydrocinnamoyl]-4-methyl-, hydrochloride 2950-08-5P, Piperazine, 1-(p-chloro- β , β -diphenylhydrocinnamoyl)-4-methyl-, hydrochloride 3149-77-7P, Piperazine, 1-[5-(p-bromophenyl)-5-(p-chlorophenyl)-3-methyl-2,4-pentadienoyl]-4-methyl-, hydrochloride 3712-21-8P, Piperazine, 1-cyclohexyl-4-[3,3,3-tris(p-chlorophenyl)propionyl]-, hydrochloride

3921-49-1P, Piperazine, 1-[p-amino- α -(p-aminobenzyl)hydrocinnamoyl]-4-methyl-, hydrochloride 3921-50-4P, Piperazine, 1-methyl-4-[o-nitro- α -(o-nitrobenzyl)hydrocinnamoyl]-, hydrochloride 3921-51-5P, Piperazine, 1-methyl-4-[p-nitro- α -(p-nitrobenzyl)hydrocinnamoyl]-, hydrochloride 3921-52-6P, Piperazine, 1-benzyl-4-[p-chloro- α -(p-chlorobenzyl)hydrocinnamoyl]-, hydrochloride 3921-53-7P, Piperazine, 1-[3,4-dichloro- α -(3,4-dichlorobenzyl)hydrocinnamoyl]-4-methyl-, hydrochloride 3921-54-8P, Piperazine, 1-[2-(p-chlorophenyl)-3-(p-methoxyphenyl)propionyl]-4-methyl-, hydrochloride 3921-55-9P, Piperazine, 1-[2-(p-chlorophenyl)-3-p-tolylpropionyl]-4-methyl-, hydrochloride 3921-56-0P, Piperazine, 1-[2,3-bis(p-chlorophenyl)valeryl]-4-methyl-, maleate 3921-57-1P, Piperazine, 1-[2,3-bis(3,4-dichlorophenyl)propionyl]-4-methyl-, hydrochloride 3921-58-2P, Piperazine, 1-[2,3-bis(p-chlorophenyl)propionyl]-4-methyl-, maleate 3985-92-0P, Piperazine, 1-[2-(p-chlorophenyl)-3-(3,4-dichlorophenyl)propionyl]-4-methyl-, maleate 4018-76-2P, Piperazine, 1-[p-chloro- α -(p-chlorobenzyl)hydrocinnamoyl]-, maleate 4192-84-1P, Piperazine, 1-[2,4-dichloro- α -(2,4-dichlorobenzyl)hydrocinnamoyl]-4-methyl-, hydrochloride 4467-32-7P, 2,4-Pentadienoic acid, 5-(2,4-dichlorophenyl)-5-hydroxy-3-methyl-, 8-lactone 4598-91-8P, Piperazine, 1-[p-chloro- α -(p-chlorobenzyl)hydrocinnamoyl]-4-methyl-, maleate 19618-30-5P, Piperazine, 1-[3,3-bis(p-chlorophenyl)acryloyl]-4-methyl- 19618-36-1P, Acrylic acid, 3,3-bis(p-chlorophenyl)- 33174-07-1P, Piperazine, 1-isobutyl-4-[3,3,3-tris(p-chlorophenyl)propionyl]-, hydrochloride 98438-67-6P, Piperazine, 1-[β , β -bis(p-fluorophenyl)hydrocinnamoyl]-4-methyl-, hydrochloride 99950-56-8P, Piperazine, 1-[3,3-bis(p-chlorophenyl)acryloyl]-4-methyl-, hydrochloride 102218-34-8P, Piperazine, 1-methyl-4-(3,3,3-triphenylpropionyl)-, hydrochloride 103799-29-7P, Piperazine, 1-[2,3-bis(p-chlorophenyl)acryloyl]-4-[2-(diethylamino)ethyl]-, hydrochloride
(preparation of)

L26 ANSWER 27 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1964:411301 HCPLUS

DOCUMENT NUMBER: 61:11301

ORIGINAL REFERENCE NO.: 61:1843h,1844a-b

TITLE: Azocines

INVENTOR(S): Jacob, Robert M.; Fouche, Jean C. L.

PATENT ASSIGNEE(S): Rhone-Poulenc SA

SOURCE: 2 pp.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 926335	-----	19630515	GB 1959-39172	19591118
DE 1173903	-----		<--	
FR 1327721	-----		DE	
PRIORITY APPLN. INFO.:	-----		FR	
			GB	19591118
			<--	

ED Entered STN: 22 Apr 2001

GI For diagram(s), see printed CA Issue.

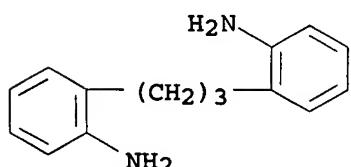
AB 1,3-Bis(o-aminophenyl)propane diphosphosphate (I) (39.4 g.) was heated, with stirring, 1.5 hrs. at 290°, cooled, treated with 150 ml.

aqueous p-MeC₆H₄SO₃H (II) (2.5 moles/ l.) and 150 ml. Et₂O, stirred to dissoln. (2 hrs.), the Et₂O layer washed with 30 ml. aqueous II solution, dried (K₂CO₃), and evaporated, and the residual oil distilled to give 4.6 g. III, b₀.15 140°, m. 55-7°. I, m. 230°, was prepared by the action of H₃PO₄ in MeOH on 1,3(o-H₂NC₆H₄)₂C₃H₆ (IV). IV, m. 70-1°, was prepared by refluxing 1,3-(o-AcNH₂C₆H₄)₂C₃H₆ (V) with HCl in glycol. V, m. 262°, was obtained by hydrogenation of 1,3-bis(o-acetamidophenyl)1-chloropropane (VI) in HCONMe₂ over Pd-C. VI, m. 165°, was obtained by the action of SOCl₂ on the 1-OH analog (VII) of VI in cold CHCl₃. VII, m. 228°, was prepared by the action of Ac₂O on the o-NH₂ analog (VIII) of VII in EtOH. VIII, m. 1045°, was obtained by the hydrogenation of the o-NO₂ analog (IX) of VIII in MeOH over PtO₂; IX, m. 101°, was prepared by the action of KBH₄ on 2,2'-dinitrochalcone in aqueous MeOH. The title compds. had useful fungicidal and anthelmintic properties, and were useful as intermediates for the preparation of therapeutically active substances.

IT 21598-82-3P, Aniline, 2,2'-trimethylenedi-, diphosphate
(preparation of)

RN 21598-82-3 HCPLUS

CN Benzenamine, 2,2'-(1,3-propanediyl)bis- (CA INDEX NAME)



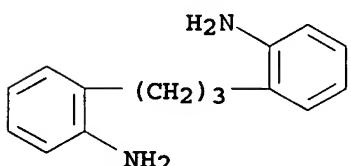
RN 92869-74-4 HCPLUS

CN Aniline, 2,2'-trimethylenedi-, diphosphate (7CI) (CA INDEX NAME)

CM 1

CRN 21598-82-3

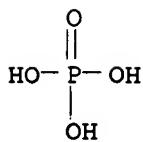
CMF C15 H18 N2



CM 2

CRN 7664-38-2

CMF H3 O4 P



IC C07D
 CC 37 (Heterocyclic Compounds (One Hetero Atom))
 IT 1639-73-2P, Dibenz[b,g]azocene, 5,6,7,12-tetrahydro- 21598-81-2P,
 Acetanilide, 2',2'''-trimethylenebis- 21598-82-3P, Aniline,
 2,2'-trimethylenedi- 21606-40-6P, 1-Propanol, 1,3-bis(o-aminophenyl)-
 21606-41-7P, Acetanilide, 2',2'''-(1-hydroxytrimethylene)bis-
 21606-42-8P, Acetanilide, 2',2'''-(1-chlorotrimethylene)bis-
 21720-48-9P, 2-Propen-1-ol, 1,3-bis(o-nitrophenyl)-
 92869-74-4P, Aniline, 2,2'-trimethylenedi-, diphosphate
 (preparation of)

L26 ANSWER 28 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1963:53847 HCPLUS

DOCUMENT NUMBER: 58:53847

ORIGINAL REFERENCE NO.: 58:9256c-d

TITLE: Polyimides for films and coatings

PATENT ASSIGNEE(S): E. I. du Pont de Nemours & Co.

SOURCE: 12 pp.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 903272		19620815	GB 1962-3762	19600311
			<--	

PRIORITY APPLN. INFO.: US 19590401

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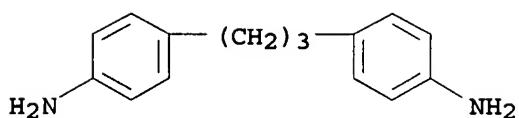
ED Entered STN: 22 Apr 2001

AB Diamines are treated with dianhydrides to form poly(amide-acids) which are converted to polyimides. Polyimides can be cast into films. Thus, 20 g. 4-(4-H2NC6H4CH2)C6H4NH2 is dissolved in 150 ml. HCONMe2, 22 g. pyromellitic dianhydride is added in small portions at 15% the mixture is diluted with 50 ml. HCONMe2, a film is cast from the mixture, the film is dried for 15 min. at 120° under N, and then heated to 300° in a vacuum oven to give the polyimide. Similarly prepared are polyimides from pyromellitic dianhydride and the following diamines: x,y-bis(4- aminophenyl)propane, (4-H2NC6H4)2O, (4-H2NC6H4)S, 4-(4- H2NC6H4CH4)C6H4NH2 and 4-(4-H2NC6H4)C6H4NH2, 4-(4-H2-NC6H4SO2)C6H4NH2, 3-H2NC6H4NH2, and a mixture of 4-H2NC6- H4NH2 and 3-H2NC6H4NH2. Also prepared are polyimides from (4-H2NC6H4)2O and 2,2-bis(3,4-dicarboxyphenyl)propane dianhydride, and from (4-H2NC6H4)2O and the dianhydride of bis(3,4-dicarboxyphenyl) ether.

IT 2767-73-9, Aniline, 4,4'-trimethylenedi-
 (reaction with tetracarboxylic dianhydrides, for polyimides)

RN 2767-73-9 HCPLUS

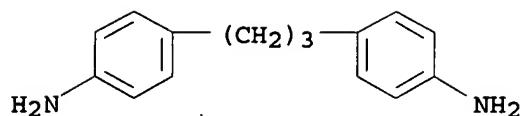
CN Benzenamine, 4,4'-(1,3-propanediyl)bis- (9CI) (CA INDEX NAME)



CC 45 (Synthetic High Polymers)
 IT 80-08-0, Aniline, 4,4'-sulfonyldi- 101-77-9, Aniline,
 4,4'-methylenedi- 101-80-4, Aniline, 4,4'-oxydi- 106-50-3,
 p-Phenylenediamine 108-45-2, m-Phenylenediamine 139-65-1, Aniline,
 4,4'-thiodi- 2767-73-9, Aniline, 4,4'-trimethylenedi-
 (reaction with tetracarboxylic dianhydrides, for polyimides)

L26 ANSWER 29 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1962:25520 HCPLUS
 DOCUMENT NUMBER: 56:25520
 ORIGINAL REFERENCE NO.: 56:4900i,4901a-c
 TITLE: Substantive properties of symmetrical diphenylalkane disazo dyes
 AUTHOR(S): Tsekhanskii, R. S.
 SOURCE: Uchenye Zapiski, Chuvashskii Gosudarst. Pedagog. Inst. im. I. Ya. Yakovleva (1959), (No. 7), 49-59
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 ED Entered STN: 22 Apr 2001
 AB A mixture of 100 ml. H₂O, 1 ml. AcOH, and 40 g. cast iron filings was heated with stirring for 10-15 min. on a steam bath; a suspension of 28.6 g. 4,4'-dinitro-1,3-diphenylpropane in 100 ml. EtOH was added and the mixture boiled for 1 hr.; boiling was continued after addition of 5 g. cast iron dust until disappearance of yellow color upon testing with alc. NaOH. A small amount of (NH₄)₂S was added and the hot mixture filtered; recrystn. from 20% EtOH yielded 21 g. 4,4'-diamino-1,3-diphenylpropane (I), m. 107°. Similarly prepared were 4,4'-diaminodiphenylmethane (II), 2,4'-diaminodiphenylmethane (III), and 4,4'-diamino-1,2-diphenylethane (IV). Bis(p-nitrobenzoyl) derivs. of I to IV were prepared by mixing equivalent quantities of diamine and p-nitrobenzoyl chloride in benzene in the presence of NaHCO₃; the products were recrystd. from pyridine. The yields and m.p. of these derivs. were 97.3%, 270°; 90.8%, 244-5°; 88.2%, 316-17°; and 78.0%, 246°, resp. Reduction in neutral medium gave 82.6% 4,4'-bis(p-aminobenzamido)diphenylmethane (V), m. 251°; 67% 2,4'-bis(p-aminobenzamido)diphenylmethane (VI), m. 136-7°; 83.3% 4,4'-bis(p-aminobenzamido)-1,2-diphenylethane (VII), m. 189-90°; and 76% 4,4'-bis(p-aminobenzamido)-1,3-diphenylpropane (VIII), m. 213-14°. The diamines: benzidine, II, V, VI, VII, and VIII were tetrazotized and coupled with the Na salt of 3-methyl-4-sulfophenyl-5-pyrazolone to give disazo dyes. The substantivities were expressed as % of dye adsorbed on cotton fibers from equimolar solns. The color and substantivity of the successive dyes were: dark brown, 67.2%; orange, 30.4%; dark orange, 61.6%; red-orange, 21.4%; orange, 9.8%; and orange, 11.3%.
 IT 2767-73-9P, Aniline, 4,4'-trimethylenedi-
 (preparation of)
 RN 2767-73-9 HCPLUS
 CN Benzenamine, 4,4'-(1,3-propanediyl)bis- (9CI) (CA INDEX NAME)



CC 44 (Dyes)
IT 2767-73-9P, Aniline, 4,4'-trimethylenedi- 34062-66-3P,
Benzanilide, 4',4'''-methylenebis[4-amino- 34062-80-1P, Benzanilide,
4',4'''-methylenebis[4-nitro- 42917-84-0P, Benzenesulfonic acid,
4,4'-[4,4'-biphenyl]enebis[azo(3-methyl-5-oxo-2-pyrazoline-4,1-
diyl)]di-, disodium salt 88870-15-9P, Benzanilide,
4',4'''-ethylenebis[4-amino- 98542-70-2P, Benzanilide,
2',4'''-methylenebis[4-amino- 98542-73-5P, Benzanilide,
2',4'''-methylenebis[4-nitro- 98878-77-4P, Benzanilide,
4',4'''-trimethylenebis[4-amino- 105521-22-0P, Benzenesulfonic acid,
4,4'-[methylenebis[p-phenyleneazo(3-methyl-5-oxo-2-pyrazoline-4,1-
diyl)]di-, disodium salt 106303-67-7P, Benzenesulfonic acid,
4,4'-[trimethylenebis[p-phenyleneiminocarbonyl-p-phenyleneazo(3-methyl-
5-oxo-2-pyrazoline-4,1-diyl)]di-, disodium salt 106764-88-9P,
Benzenesulfonic acid, 4,4'-[ethylenebis[p-phenyleneiminocarbonyl-p-
phenyleneazo(3-methyl-5-oxo-2-pyrazoline-4,1-diyl)]di-, disodium salt
106991-94-0P, Benzanilide, 4',4'''-ethylenebis[4-nitro-
107136-81-2P, Benzenesulfonic acid, 4,4'-[methylenebis[p-
phenyleneiminocarbonyl-p-phenyleneazo(3-methyl-5-oxo-2-pyrazoline-4,1-
diyl)]di-, disodium salt 107277-61-2P, Benzanilide,
4',4'''-trimethylenebis[4-nitro-
(preparation of)

L26 ANSWER 30 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1961:96728 HCPLUS
DOCUMENT NUMBER: 55:96728
ORIGINAL REFERENCE NO.: 55:18199d-g
TITLE: Linear polyureas
PATENT ASSIGNEE(S): W. R. Grace & Co.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 863297	-----	19610322	GB 1959-11122	19590401

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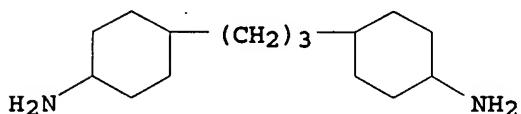
ED Entered STN: 22 Apr 2001
AB High-mol.-weight, fiber-forming, linear, thermoplastic polyurea polymers
may be formed from equimolar amts. of urea and alicyclic diamines.
Thus, 4,4'-diaminodicyclohexylmethane (I) 63, urea 18, m-cresol 500,
and H₂O 100 g. were heated with stirring to 200° under N, and
the reaction continued for 4 h. while NH₃, H₂O, and 300 g. m-cresol
were distilled off, and then poured into 2000 g. MeOH kept at
60-80°. The polymer precipitated in colorless flocks, was
centrifuged, suspended in MeOH, refluxed for 3 h., and then
centrifuged to give 85% of theor. yield of a polyurea, m. 360°,
relative viscosity 2.25 (in m-cresol). Similarly, homologs of I gave
polyureas (derivative, % yield, m.p. and relative viscosity given):
3,3',5,5'-tetramethyl, 89, 270-80°, 1.42; 3,3'-dimethyl, 85%,
260-70°, 1.40; and 3,3'-diethyl, 97.5%, 255-6°, 1.45.
Treating urea with 4,4'-diaminodicyclohexylpropane gave 95% polyurea,

m. 325-35°, relative viscosity 1.2. The polyurea made from 4,4'-bis(methylamino)dicyclohexylmethane (II) was obtained in quant. yield, m. 110-30°, relative viscosity 1.2. Polyureas made from mixts. of I and II had m.ps. directly proportional to the mole % of the 2 diamines in the mixture. The polyureas may also be prepared by bulk polymerization in which the components are melted together, and the adduct is crystallized from m-cresol.

IT 101540-42-5P, Cyclohexylamine, 4,4'-trimethylenebis-(in polyurea manufacture)

RN 101540-42-5 HCPLUS

CN Cyclohexanamine, 4,4'-(1,3-propanediyl)bis- (9CI) (CA INDEX NAME)



CC 31 (Synthetic Resins and Plastics)

IT 60469-06-9P, Cyclohexylamine, 4,4'-methylenebis[N-methyl-

101540-42-5P, Cyclohexylamine, 4,4'-trimethylenebis-(in polyurea manufacture)

L26 ANSWER 31 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1961:27829 HCPLUS

DOCUMENT NUMBER: 55:27829

ORIGINAL REFERENCE NO.: 55:5462a-i,5463a-h

TITLE: Syntheses in the colchicine field

AUTHOR(S): Williams, K. I. H.; Cremer, S. E.; Kent, F. W.; Sehm, E. S.; Tarbell, D. S.

CORPORATE SOURCE: Univ. of Rochester, Rochester, NY

SOURCE: Journal of the American Chemical Society (1960), 82, 3982-8

CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

OTHER SOURCE(S): CASREACT 55:27829

ED Entered STN: 22 Apr 2001

AB 2-(3-Methoxyphenyl)-2-[β-(2-amino-3,4,5-trimethoxyphenyl)ethyl]-1,3-dioxolane (I) and the corresponding 1,3-oxathiolane (II) were synthesized as part of a synthetic approach to colchicine. The Pschorr-type ring closure of I led exclusively to 2-(3-methoxyphenyl)-6,7,8-trimethoxyquinoline (III). 3,4,5-(MeO)₃C₆H₂CO₂Me (IV) (45 g.) in 225 cc. Ac₂O treated at 50-65° with 61 g. powdered Cu(NO₃)₂, the mixture stirred 1 hr. at room temperature, poured onto 1 kg. ice, filtered, and the residue chromatographed from 200 cc. C₆H₆ on 25 g. Al₂O₃ yielded 46 g. 2-NO₂ derivative (V) of IV, m. 67-8° free acid (VI) m. 165-6°. VI (12.35 g.) added slowly to 1.7 g. NaBH₄ in 50 cc. diglyme, the mixture treated during 1 hr. at 0° with 7.8 g. Et₂O·BF₃, stirred 1 hr., poured onto 600 cc. ice and H₂O, and filtered gave 10.87 g. 3,4,5,2-(MeO)₈(O₂N)C₆HCH₂OH (VII), m. 70.5-1.5° (C₆H₆-heptane). AlCl₃ (6.4 g.) in 60 cc. diglyme added dropwise with stirring to 54 g. V, 5.5 g. NaBH₄, and 200 cc. diglyme, the mixture stirred 3 hrs. at room temperature and 1 hr. at 75-80°, and worked up yielded 33 g. VII, pale yellow needles, m. 70-1° (heptane). VII (6 g.) in 140 cc. dry C₆H₆ treated with cooling with 1.2 g. 50% NaH dispersion and 4.6 g. p-MeC₆H₄SO₂Cl, the mixture stirred 13 hrs. at room temperature, and worked up yielded 8.8-9.2 g. p-toluenesulfonate (VIII), m. 123-5° (decomposition). VII (2.43

g.) in 10 cc. dry C₆H₆ treated during 15 min. at 5° with 2.1 g. PC15 and the resulting semi-solid chromatographed on 25 g. Al₂O₃ yielded 1.83 g. 3,4,5,2-(MeO)₃(O₂N)C₆HCH₂Cl (IX), pale yellow needles, m. 42-3° (heptane), and 115 mg. [3,4,5,2-(MeO)₃(O₂N)C₆H]2O, m. 133.5-34° (C₆H₆-hexane). VIII and excess LiBr in Me₂CO refluxed 20 hrs. gave 3,4,5,2-(MeO)₃(O₂N)C₆HCH₂Br, needles, m. 46.5-7.5° (heptane). IX (21.7 g.) in 50 cc. HCONMe₂ added with stirring to 5.5 g. 50% NaH dispersion in 100 cc. CH₂(CO₂Et)₂, the mixture stirred 20 hrs. at room temperature, filtered, and evaporated yielded

27.7

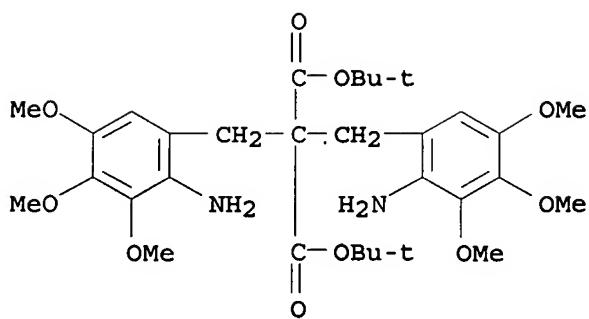
g. 3,4,5-(MeO)₃C₆H₂CHCH(CO₂Et)₂ (X), pale yellow needles, m. 79° (heptane). X (1.4 g.) in 5 cc. AcOH treated with stirring with 0.25 cc. concentrated HNO₃, kept 0.5 hr., poured onto ice, and the product isolated with Et₂O gave 0.4 g. 2-carbethoxy-5,6,7-trimethoxyindanone, needles, m. 184-6° (aqueous EtOH). CH₂(CO₂CMe₃)₂ (2.2 g.) in 15 cc. tetrahydrofuran treated with 0.48 g. 50% NaH dispersion and then with 2 g. VIII in 10 cc. tetrahydrofuran, the mixture stirred 2 hrs., refluxed 0.5 hr., and chromatographed on 5 g. Al₂O₃ yielded 1.75 g. [3,4,5,2-(MeO)₃(O₂N)C₆H]2C(CO₂CMe₃)₂, m. 187-8° (decomposition) (C₆H₆-cyclohexane), reduced with Raney Ni-N₂H₄ to [2,3,4,5-H₂N(MeO)₃C₆H]2C(CO₂CMe₃)₂, (XI), converted with Ac₂O-C₅H₅N to the N,N'-di-Ac derivative of XI, m. 179-80° (C₅H₆-heptane). VIII (8 g.), 100 cc. dry HCONMe₂, and 100 cc. dry C₆H₆ added with stirring to 1 g. 50% NaH dispersion in 100 cc. CH₂(CO₂CMe₃)₂, the mixture stirred 16 hrs. at room temperature, refluxed 30 min., cooled, poured into 250 cc. iced H₂O, and the product isolated with C₆H₆ yielded 7.1 g. 3,4,5,2-(MeO)₃(O₂N)C₆HCH(CO₂CMe₃) (XII), m. 59-60° (chromatographed). IX, NaH dispersion, and CH₂(CO₂CMe₃)₂ in 1:1:3 molar ratio stirred 3 hrs. at room temperature in 1:1 C₆H₆-HCONMe₂ gave 61% XII. XII (13.3 g.) in 125 cc. dry Et₂O and LiNH₂ from 0.23 g. Li and 100 cc. liquid NH₃ refluxed 0.5 hr., diluted with 50 cc. Et₂O, the NH₃ removed, the residue treated with stirring with 6 g. m-MeOC₆H₄COCl (XIII) in 30 cc. Et₂O, stirred 2 hrs., filtered, and evaporated gave 3,4,5,2-(MeO)₃(O₂N)C₆HC(CO₂CMe₃)COC₆H₄OMe-m (XIV), m. 104-5° (heptane). The crude XIV refluxed 1 hr. with 147 cc. glacial AcOH, 3 cc. Ac₂O, and 0.4 g. p-MeC₆H₄SO₃H, cooled, poured onto 1 kg. ice, basified with 40% aqueous NaOH, the product isolated with C₆H₆, and chromatographed on 20 g. Al₂O₃ gave 9-9.5 g. 3,4,5,2-(MeO)₃(O₂N)C₆HCH₂CH₂COC₆H₄OMe-m (XV), yellow needles, m. 92-3°. A similar run with the mixed anhydride of ClCO₂Et and m-MeOC₆H₅CO₂H instead of XIII gave 71% XV; oxime, yellow needles, m. 97-9° (aqueous EtOH). XV (10.5 g.), 4 g. (CH₂OH)₂, and 0.3 g. p-MeC₆H₄SO₃H in 100 cc. C₆H₆ refluxed 48 hrs. with the azeotropic removal of H₂O and worked up gave 10.6 g. 2-NO₂ analog (XVI) of I, prisms, m. 53-5° (heptane); in 1 run a dimorph, yellow needles, m. 71-2°, was obtained from the mother liquor. XVI (8.5 g.) in 400 cc. C₆H₆ hydrogenated 12 hrs. at 60° over 3 g. prereduced PtO₂ in 500 cc. C₆H₆ yielded 7.5 g. I, m. 84-5° (heptane). I (400 mg.) and 1 cc. m-MeOC₆H₄CHO heated 4 hrs. at 140°, poured into 20 cc. boiling heptane, cooled, filtered, and the residue chromatographed over 5 g. Al₂O₃ yielded 320 mg. 2-(m-MeOC₆H₄CH₂:N) analog of I, yellow needles, m. 93-4° (heptane); N-Ac derivative (XVII) of I, plates, m. 116-18° (aqueous MeOH). I under a variety of conditions gave small amts. of III. I (100 mg.) in 5 cc. 0.1N HCl extracted with Et₂O gave 8 mg. III, m. 104-5° the aqueous phase evaporated yielded 60 mg. III.HCl, m. 146-50° (tetrahydrofuran). XV (8 g.) in 100 cc. MeOH stirred 7 hrs. with 2.5 g. NaBH₄ in 50 cc. MeOH gave 7.2 g. 3,4,5,2-(MeO)₃(O₂N)C₆H(CH₂)₂CH(OH)C₆H₄OMe-m (XVII), m. 90-1° (aqueous MeOH). XVII (6 g.) and 1 cc. 95% N₂H₄ in 900 cc. 95% EtOH hydrogenated over 2 g. Raney Ni, the mixture treated after 10

and 15 min. with an addnl. 1-cc. portion N₂H₄ each time, refluxed 3 hrs., filtered, and distilled gave the 2-NH₂ analog (XVIII) of XVII, m. 72-4° (C₆H₆-petr. ether), which with Ac₂O-C₅H₅N yielded the O,N-diacetate of XVIII, m. 118-20° (C₆H₆-petr. ether). XVIII (2 g.) in 16 cc. N H₂SO₄ treated dropwise at 0° with 0.4 g. NaNO₂ in 5 cc. H₂O, the mixture poured into 1 g. KI, 0.5 g. NaOAc, 0.2 g. CuI, 5 cc. H₂O, and 50 cc. Me₂CO, heated with stirring on the steam bath to remove the Me₂CO, extracted with Et₂O, and the residue from the extract chromatographed on 35 g. Al₂O₃ yielded 0.8 g. 3,4,5-(MeO)₃C₆H₂CH₂CH₂COC₆H₄OMe-m (XIX), m. 71-3° (heptane). XV (15 g.), 30 cc. HSCH₂CH₂OH, and 0.3 g. p-MeC₆H₄SO₃H in 100 cc. refluxed 2 days with the azeotropic removal of H₂O gave 17.1 g. 2-NO₂ analog (XX) of II, pale yellow, m. 74-5° (heptane). XX (17.1 g.) treated with stirring with 24 g. Al-Hg in 500 cc. Et₂O gave 10 g. II, m. 76-8° (aqueous MeOH). XVII hydrolyzed with aqueous alc. HCl gave 72% 2,3,4,5-AcNH(MeO)₃C₆HCH₂CH₂COC₆H₄OMe-m (XXI), plates, m. 136.5-8° (aqueous MeOH). II treated with Ac₂O-C₅H₅N and the product hydrolyzed with aqueous alc. HCl gave XXI. 3,4,5-(MeO)₃C₆H₂CO₂H reduced with NaH and Et₂O.BF₃ in the usual manner gave 86% 3,4,5-(MeO)₃C₆H₂CH₂OH (XXII). IV reduced with LiAlH₄ in tetrahydrofuran gave 66-8%, in Et₂O 24-37% XXII, b_{0.4} 137-40° 3,5-dinitrobenzoate m. 144-6°. The Li salt of 3,4,5-(MeO)₃C₆H₂CH₂CH(CO₂CMe₃)₂ (XXIII) treated with XIII and then decarbo-tert-butoxylated gave XIX, needles, m. 69-70° (heptane); oxime m. 94.5-5.5° (aqueous EtOH). 2-Methoxy-4-carboxy tropone (XXIV) (0.9 g.) and 0.5 g. Et₃N in 100 cc. dry Et₂O treated with stirring at 0° with 0.54 g. ClCO₂Et in 25 cc. Et₂O, the mixture stirred 2 hrs. at 0° and 1 hr. at room temperature, filtered, and evaporated gave the mixed anhydride (XXV), pale yellow, m. 84-5° (sealed tube). Li salt of 0.002 mole XXIII and 0.51 g. XXV in 15 cc. dry PhMe kept overnight, washed, and chromatographed on Florisil yielded 2-methoxy-4-[α-oxo-β,β-dicarbo-tert-butoxy-γ-(3,4,5-trimethoxyphenyl)]propyltropone, yellow powder, m. about 75° (indefinite). XXV (0.252 g.) and 0.093 g. PhNH₂ in 15 cc. C₆H₆ warmed briefly to 60°, kept overnight, and filtered gave 0.071 g. XXIV; the filtrate worked up gave 0.08 g. anilide of XXIV, m. 153-3.5° (C₆H₆-heptane). XII in C₆H₆ hydrogenated 13 hrs. at 70-80°/2 atmospheric over PtO₂ gave the 2-NH₂ analog (XXVI) of XII, m. 74-5° (pentane), which with Ac₂O-C₅H₅N gave the N-Ac derivative (XXVII), m. 135.5-36° (heptane). XXVI with XIII in C₅H₅N gave the N-(m-MeOC₆H₄CO) derivative of XXVI, m. 110-10.5° (heptane). The Li salt from 2 equivs. XXVII treated with 6 equivs. XIII, the product decarbo-tert-butoxylated, and the resulting oily ketone mixture treated with 2,4-(O₂N)C₆H₃NHNH₂ gave the 2-(m-MeOC₆H₄CONH) analog of XV, m. 215.5-16° (EtOAc-EtOH).

IT 116282-95-2P, Malonic acid, bis(2-amino-3,4,5-trimethoxybenzyl)-, di-tert-butyl ester
(preparation of)

RN 116282-95-2 HCPLUS

CN Malonic acid, bis(2-amino-3,4,5-trimethoxybenzyl)-, di-tert-butyl ester (6CI) (CA INDEX NAME)



CC 10G (Organic Chemistry: Heterocyclic Compounds)
 IT 3840-31-1P, Benzyl alcohol, 3,4,5-trimethoxy- 5081-42-5P, Benzoic acid, 3,4,5-trimethoxy-2-nitro-, methyl ester 5435-28-9P, Benzyl alcohol, 3,4,5-trimethoxy-2-nitro- 33119-23-2P, 1,3,6-Cycloheptatriene-1-carboxylic acid, 6-methoxy-5-oxo- 52978-82-2P, Toluene, α -chloro-3,4,5-trimethoxy-2-nitro- 66907-52-6P, Benzoic acid, 3,4,5-trimethoxy-2-nitro- 101097-40-9P, 1,3,6-Cycloheptatriene-1-carboxanilide, 6-methoxy-5-oxo- 101103-57-5P, 2-Indancarboxylic acid, 5,6,7-trimethoxy-1-oxo-, ethyl ester 101585-71-1P, Benzyl alcohol, 3,4,5-trimethoxy-2-nitro-, p-toluenesulfonate 102160-82-7P, Propiophenone, 3'-methoxy-3-(3,4,5-trimethoxy-2-nitrophenyl)-, oxime 102458-13-9P, Ether, bis(3,4,5-trimethoxy-2-nitrobenzyl) 103387-07-1P, Toluene, α -bromo-3,4,5-trimethoxy-2-nitro- 108367-76-6P, Quinoline, 6,7,8-trimethoxy-2-(m-methoxyphenyl)-, hydrochloride 108367-77-7P, Quinoline, 6,7,8-trimethoxy-2-(m-methoxyphenyl)- 108761-20-2P, Carbonic acid, ethyl ester, anhydride with 6-methoxy-5-oxo-1,3,6-cycloheptatriene-1-carboxylic acid 108761-20-2P, 1,3,6-Cycloheptatriene-1-carboxylic acid, 6-methoxy-5-oxo-, anhydride with Et carbonate 108984-58-3P, Propiophenone, 3'-methoxy-3-(3,4,5-trimethoxyphenyl)-, oxime 108984-62-9P, Benzyl, m-methoxy- α -(3,4,5-trimethoxy-2-nitrophenethyl)- 109158-32-9P, Propiophenone, 3'-methoxy-3-(3,4,5-trimethoxy-2-nitrophenyl)- 109935-64-0P, Benzyl alcohol, α -(2-amino-3,4,5-trimethoxyphenethyl)-m-methoxy- 110049-40-6P, Propiophenone, 3'-methoxy-3-(3,4,5-trimethoxyphenyl)- 110147-69-8P, Malonic acid, (2-amino-3,4,5-trimethoxybenzyl)-, di-tert-butyl ester 111587-60-1P, Benzyl alcohol, 3,4,5-trimethoxy-, 3,5-dinitrobenzoate 112115-54-5P, Malonic acid, (2-acetamido-3,4,5-trimethoxybenzyl)-, di-tert-butyl ester 112198-00-2P, Acetanilide, 6'-(2-m-anisoylethyl)-2',3',4'-trimethoxy- 112198-05-7P, 1,3-Dioxolane, 2-(m-methoxyphenyl)-2-(3,4,5-trimethoxy-2-nitrophethyl)- 113183-78-1P, Malonic acid, (3,4,5-trimethoxy-2-nitrobenzyl)-, di-tert-butyl ester 113649-53-9P, Acetanilide, 6'-(3-hydroxy-3-(m-methoxyphenyl)propyl)-2',3',4'-trimethoxy-, acetate 115001-13-3P, Malonic acid, m-anisoyl(3,4,5-trimethoxy-2-nitrobenzyl)-, di-tert-butyl ester 115294-28-5P, Malonic acid, (6-methoxy-5-oxo-1,3,6-cycloheptatrien-1-ylcarbonyl)(3,4,5-trimethoxybenzyl)-, di-tert-butyl ester 116029-68-6P, Malonic acid, bis(3,4,5-trimethoxy-2-nitrobenzyl)-, di-tert-butyl ester 116213-39-9P, Malonic acid, bis(2-acetamido-3,4,5-trimethoxybenzyl)-, di-tert-butyl ester 116282-95-2P, Malonic acid, bis(2-amino-3,4,5-trimethoxybenzyl)-, di-tert-butyl ester 117204-49-6P, Aniline, 2,3,4-trimethoxy-N-m-methoxybenzylidene-6-[2-[2-(m-methoxyphenyl)-1,3-dioxolan-2-yl]ethyl]- 117878-35-0P, Aniline, 2,3,4-trimethoxy-6-[2-[2-(m-methoxyphenyl)-1,3-oxathiolan-2-yl]ethyl]- 117878-36-1P, Aniline, 2,3,4-trimethoxy-6-[2-[2-(m-methoxyphenyl)-1,3-

dioxolan-2-yl]ethyl] - 118923-03-8P, Acetanilide,
 2',3',4'-trimethoxy-6'-(2-[2-(m-methoxyphenyl)-1,3-dioxolan-2-
 yl]ethyl] - 119570-18-2P, m-Anisanilide, 6'-(2-m-anisoylethyl)-
 2',3,4'-trimethoxy- 123906-31-0P, Malonic acid, (2-m-anisamido-3,4,5-
 trimethoxybenzyl)-, di-tert-butyl ester 124141-75-9P, m-Anisanilide,
 6'-(2-m-anisoylethyl)-2',3,4'-trimethoxy-, (2,4-
 dinitrophenyl)hydrazone 132105-81-8P, 1,3-Oxathiolane,
 2-(m-methoxyphenyl)-2-(3,4,5-trimethoxy-2-nitrophenethyl)-
 (preparation of)

L26 ANSWER 32 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1959:44995 HCPLUS

DOCUMENT NUMBER: 53:44995

ORIGINAL REFERENCE NO.: 53:8067f-i,8068a

TITLE: p,p'-Dinitro and -amino derivatives of
 1,3-diphenylpropane

AUTHOR(S): Greene, Frederick D.; Edwards, Ben E.

CORPORATE SOURCE: Massachusetts Inst. of Technol., Cambridge

SOURCE: Journal of Organic Chemistry (1958), 23,
 487-8

CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

OTHER SOURCE(S): CASREACT 53:44995

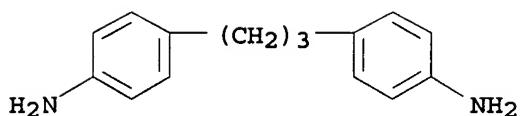
ED Entered STN: 22 Apr 2001

AB Nitration of Ph(CH₂)₃Ph (I) with Ac₂O, HNO₃, and H₂SO₄ yielded 22% (p-O₂NC₆H₄)₂(CH₂)₃ (II), oxidized to p-O₂NC₆H₄CO₂H in substantially greater than 50% yield. I (15 ml., b0.1 78-80°, n_{25D} 1.5570) in 20 ml. Ac₂O added dropwise with stirring below 0° to a nitrating medium (prepared by slow addition of 4 ml. concentrated H₂SO₄ and 12 ml. concentrated HNO₃ to 20 ml. Ac₂O below 0°), the mixture stirred 30 min. at 0° and diluted with 100 ml. H₂O, the solution stirred 30 min. at room temperature, the crude product washed with water, and the material (19 g., m. 85-100°) crystallized 4 times yielded 4.5 g. II, m. 140-1° (alc.), λ 278, 233 (min.), 216 μμ (ε 21,000, 4250, 15,400, 95% alc.), oxidized to yield 74% p-O₂NC₆H₄CO₂H, m. 234-6°. II (0.55 g.) and 0.5 ml. 95% N₂H₄.H₂O in 10 ml. dioxane warmed with addition of 0.5 g. Raney Ni, the solution kept 1 hr. at 60° with occasional addns. of small amts. of catalyst, the filtered solution decolorized with Norit, and the refiltered solution diluted with 30 ml. H₂O yielded 50% (p-H₂-NC₆H₄)₂(CH₂)₃ (III), m. 103-4° (20 ml. C₆H₁₄), λ 290, 266 (min.), 238, 216 (min.) μμ (ε 2960, 1280, 21,200, 7810, 95% alc.). II (2 g.) in 150 ml. alc. refluxed 4 hrs. with 3.2 g. Na₂S.9H₂O and 0.8 g. S in 12 ml. H₂O, the cooled solution diluted with 500 ml. H₂O, extracted 4 times with 100 ml. Et₂O, the Et₂O extract washed 4 times with 80 ml. 5% HCl, the acidic extract basified and extracted with Et₂O, the red oily product chromatographed in C₆H₆ over 50 g. Al₂O₃, and eluted with C₆H₆ yielded 38% p-H₂NC₆H₄(CH₂)₃C₆H₄NO₂-p, m. 92-3° (C₆H₁₂), λ 278, 256 (min.), 238, 225 (min.) μμ (ε 11, 100, 8,150, 4080, 9680, 95% alc.). Further elution with C₆H₆Et₂O, Et₂O, and Et₂O-MeOH yielded 180 mg. impure III, and 2 oily unidentified fractions.

IT 2767-73-9P, Aniline, 4,4'-trimethylenedi-
 (preparation of)

RN 2767-73-9 HCPLUS

CN Benzenamine, 4,4'-(1,3-propanediyl)bis- (9CI) (CA INDEX NAME)



CC 10E (Organic Chemistry: Benzene Derivatives)
 IT 2767-73-9P, Aniline, 4,4'-trimethylenedi- 10368-11-3P,
 Propane, 1,3-bis(p-nitrophenyl)- 38758-22-4P, Aniline,
 p-[3-(p-nitrophenyl)propyl]- 100388-04-3P, 1,3-Dioxolane,
 2-(3-bromopropyl)-2-phenyl-
 (preparation of)

L26 ANSWER 33 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1938:3432 HCAPLUS

DOCUMENT NUMBER: 32:3432

ORIGINAL REFERENCE NO.: 32:517a-d

TITLE: Para arsenated mixed ethers

AUTHOR(S): Barr, Paul O.; Hamilton, Cliff S.

SOURCE: Journal of the American Chemical Society (1937), 59, 2444-6

CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

ED Entered STN: 16 Dec 2001

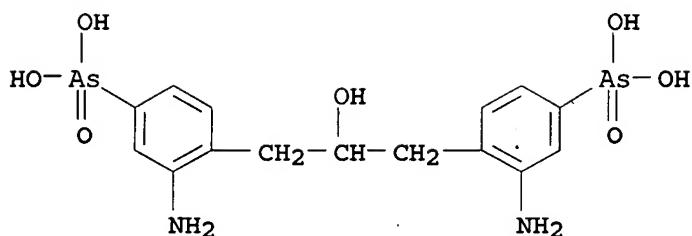
AB 4-HOC6H4AsO3H2 (109 g.) in 375 cc. 6 N NaOH and 50 cc. HOCH2(CH2Cl)2, refluxed 2 hrs. and acidified with 12 N HCl, give 30% of sym-bis(4-aronophenoxy)propan-2-ol (I) m. above 270°; with HNO3-H2SO4 at 0° there results 92% of the 2-nitroisopropyl nitrate, yellow, decomp. 218°, which, refluxed with 2 N HCl for 4 hrs., gives 96% of the 2-NO2 derivative of I, yellow, decomp. 260°; catalytic reduction (Raney Ni) gives 74% of the 2-NH2 derivative of I, decomp. 186° (Na salt). ClCH2CH(OH)CH2OH gives 85-90% of 4-aronophenoxyglycerol (II), pink, m. 177-8° (Na salt, m. above 250°); HNO3 and H2SO4 give 75-80% of 2-nitro-4-aronophenoxypropylene dinitrate, yellow, m. 132-3°; refluxing with 2 N HCl yields 80% of 2-nitro-4-aronophenoxyglycerol, light tan, m. 98-9° (80% yield) Na salt, yellow; catalytic reduction gives 60% of the 2-NH2 derivative, light gray, m. 194-6° (decomposition) (Na salt, light gray). Reduction of I with SO2-HI gives 82% of 4-β,γ-dihydroxypropoxyphenylarsenious oxide, m. 122-3°; 3-NO2 derivative, yellow, m. 167-8° (71% yield); 3-NH2 derivative, m. above 250° (20% yield). Reduction with 25% H3PO2 converts I to 4,4'-bis(β,γ-dihydroxypropoxy)arsenobenzene, orange, m. 164-5° (90% yield); 3,3'-di-NO2 derivative (III), yellow, m. 197-8° (71% yield); 3,3'-di-NH2 derivative, yellow, m. 170-3° (decomposition) (85% yield). The tetrinitrate of III, light tan, m. 98-9° (80% yield from the dinitrate of II).

IT 860526-27-8P, m-Arsanilic acid, 4,4'-(2-hydroxytrimethylene)-di-

(preparation of)

RN 860526-27-8 HCAPLUS

CN m-Arsanilic acid, 4,4'-(2-hydroxytrimethylene)-di- (4CI) (CA INDEX NAME)



CC 10 (Organic Chemistry)

IT 198763-11-0P, Benzeneearsonic acid, p-(2,3-dihydroxypropoxy)- 854650-48-9P, 1,2-Propanediol, 3-(p-arsenosophenoxy)- 854650-50-3P, 1,2-Propanediol, 3-(4-arsenososo-2-nitrophenoxy)- 854650-52-5P, 1,2-Propanediol, 3,3'-(arsenobis(3-nitro-p-phenyleneoxy)]di- 854650-54-7P, 1,2-Propanediol, 3-(2-amino-4-arsenosophenoxy)- 860517-59-5P, Benzeneearsonic acid, 4,4'-(2-hydroxytrimethylenedioxy)bis[3-nitro-, nitrate 860517-61-9P, Benzeneearsonic acid, 4,4'-(2-hydroxytrimethylenedioxy)bis[3-nitro- 860518-38-3P, Benzeneearsonic acid, p-(2,3-dihydroxypropoxy)-, Na salt 860525-49-1P, Arsenobenzene, 4,4'-bis(2,3-dihydroxypropoxy)-3,3'-dinitro-, tetranitrate (ester) 860525-51-5P, Arsenobenzene, 4,4'-bis(2,3-dihydroxypropoxy)-3,3'-dinitro- 860525-53-7P, Arsenobenzene, 4,4'-bis(2,3-dihydroxypropoxy)- 860525-53-7P, 1,2-Propanediol, 3,3'-(arsenobis(p-phenyleneoxy)]di- 860525-92-4P, Aniline, 3,3'-arsenobis[6-(2,3-dihydroxypropoxy)- 860525-92-4P, Arsenobenzene, 3,3'-diamino-4,4'-bis(2,3-dihydroxypropoxy)- 860525-92-4P, 1,2-Propanediol, 3,3'-(arsenobis(3-amino-p-phenyleneoxy)]di- 860526-09-6P, m-Arsanilic acid, 4-(2,3-dihydroxypropoxy)-, Na salt 860526-11-0P, m-Arsanilic acid, 4-(2,3-dihydroxypropoxy)- 860526-27-8P, m-Arsanilic acid, 4,4'-(2-hydroxytrimethylene)-di- 867133-43-5P, 1,2-Propanediol, 3,3'-(arsenobis(3-nitro-p-phenyleneoxy)]di-, tetranitrate (ester) (preparation of)

L26 ANSWER 34 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1930:30242 HCAPLUS

DOCUMENT NUMBER: 24:30242

ORIGINAL REFERENCE NO.: 24:3217b-i,3218a

TITLE: Urea formation from azides of mono- and dialkylacetic acids

AUTHOR(S): Curtius, Theodor; Sieber, Wilhelm; Nadenheim, Fanny; Hamsch, Otto; Ritter, Wolfgang

SOURCE: Journal fuer Praktische Chemie (Leipzig) (1930), 125, 152-210

CODEN: JPCEAO; ISSN: 0021-8383

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

ED Entered STN: 16 Dec 2001

AB Me₂CHCH₂CH₂CH₂CO₂Et and N₂H₄.H₂O, boiled 5 h., give isoamylacetylhydrazide, m. 37-40°; HCl salt, hygroscopic, m. 174° (decomposition); benzal compound, m. 93°; with I in absolute EtOH there results sym. diisoamylacetylhydrazine, m. 123°, HNO₂ gives isoamylacetyl azide, oily; absolute EtOH gives Et isohexylcarbamate, b. 122°; H₂O gives Me₂CHCH₂CH₂CH₂CONH₂. Decomposition of the urethane with HCl gives isohexylamine, b. 122-3°; HCl salt, m. 220°; chloroplatinate, yellow, decomp. 200°; HgCl₂ compds., m. 185-7°; picrate, yellow, m. 123-5°. Isohexyl isocyanate, b. 50°; with isohexylamine this gives sym.

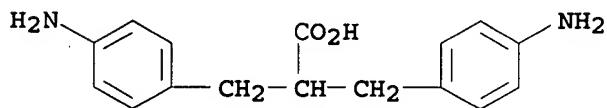
diisohexylurea, m. 44°; with H₂NCH₂CO₂Et there results the Et ester, m. 48-50°, of isohexylureidoacetic acid. m. 121-3°. The Et ester and N₂H₄.H₂O give the hydrazide, m. 115-6°, whose benzal compound m. 211°. Di-Et ethylisobutylmalonate, b₁₃ 121-4° (74% yield); the free acid m. 97-8°; above the m. p. there results 72% of the acetic acid, b₇₄₈ 218-9° (Ag salt), whose Et ester b₇₄₇ 178°; N₂H₄.H₂O gives ethylisobutylacetylehydrazide, m. 74° (76% yield); HCl salt, m. 105°; picrate, yellow, m. 79°; benzal compound, m. 88°; o-hydroxy-benzal compound, m. 117°; Ac compound, m. 124°; Bz compound, m. 141°. With I in EtOH there results sym. diethylisobutylacetylehydrazine, m. 204°. Ethylisobutylacetylehydrazide, oily, decomp. in the cold; with H₂O after 8 h. boiling there result 2 compds., m. 223° and 215°, which show the composition C₁₁H₂₂ON₂ (sym. diethylisobutylcarbinurea) and also ethylisobutylacetamide, m. 88°. Ethylisobutylcarbin isocyanate, b₇₅₀ 165°; PhNH₂ gives the phenylurea, Me₂CHCH₂CHEtNHCONHPh, m. 100°; absolute EtOH gives Et ethylisobutylcarbincarbamate, b₂₅ 128°; hydrolysis gives 87.5% of ethylisobutylcarbinamine, b₇₄₈ 130-4°, d₁₅ 0.7278, nD₂₁ 1.4160; HCl salt, m. 185° (decomposition); chloroplatinate, yellow, decomp. above 200°; picrate, yellow, m. 123°. Iso-Bu hydrazide, m. 104°; HCl salt, m. 122°; picrate, yellow, m. 114°; o-hydroxybenzal compound, m. 170°; acetophenone compound, m. 154°; Ac compound, m. 156°; Bz compound, m. 178°. The pure azide could not be prepared, for it decomp. into Me₂CHNCO, b₇₅₆ 72°; the latter, boiled with H₂O, gives sym. diisopropylurea, m. 192°; PhNH₂ gives sym. isopropylphenylurea, m. 156°. Anhydrous N₂H₄ gives diisopropylhydrazodicarboxamide, (NHCONHCHMe₂)₂, m. 212°. H₂NCH₂CO₂Et gives Et isopropylureidoacetate, m. 100°, gives with absolute EtOH isopropylureidoacetyl hydrazide, m. 179° (HCl salt, hygroscopic; benzal compound, m. 225° (decomposition)). HNO₂ gives the azide, m. about 100°. Isobutylacetylehydrazide, m. 35-8°; HCl salt, decomp. above 90°; picrate, yellow, m. 117°; benzal compound, m. 89°; o-hydroxybenzal compound, m. 153°; acetophenone compound, m. 89°; Ac compound, m. 87° Bz compound, m. 138-9°. Isobutylacetylehydrazide, decomp. during purification; H₂O gives Me₂CHCH₂CH₂CONH₂, m. 141°; boiling the azide in Et₂O gives Me₂CHCH₂CH₂NCO, b. 132°, and Me₂CHCH₂NHCONH₂, m. 94°. Heating the isocyanate with H₂O for 0.5 h. gives CO(NHCH₂CH₂CHMe₂)₂, m. 46°. PhNH₂ gives sym. isoamylphenylurea, m. 116°. H₂NCH₂CO₂Et, followed by N₂H₅, H₂O, gives isoamylureidoacetyl hydrazide, m. 114.6°; benzal compound, m. 192°. Azide, easily hydrolyzed. Di-Et ester, b₁₄ 145°, b₂₀ 132° (73% yield), of isobutylisoamylmalonic acid, m. 122-4°; Et isobutylisoamylacetate, b₇₄₁ 215-20°; N₂H₄ gives isobutylisoamylacetylehydrazide, which could not be obtained free from ester; HCl salt, m. 164°; picrate, m. 101-2°; benzal compound, m. 112°; acetone compound, oily; acetophenone compound, m. 100°; Ac compound, m. 120°; Bz compound, m. 124°. I in EtOH gives sym. diisobutylisoamylacetylehydrazine, m. 225-7°. Isobutylisoamylacetylehydrazide decomp. in Et₂O at room temperature, giving isobutylisoamylcarbin isocyanate, b₂₆ 105-15°, b. 210-20°; heating with H₂O gives sym. diisobutylisoamylcarbinurea, m. 228-30°; concentrated NH₄OH gives isobutylisoamylcarbinurea, m. 103°; PhNH₂ gives sym. isobutylisoamylcarbinphenylurea, m. 190°. The azide with absolute EtOH gives Et isobutylisoamylcarbincarbamate, b₁₈ 160-70°.

Isobutylisoamylcarbinamine (4-amino-2,7-dimethyloctane), b744
 186-90°, α_20 1.42323, β_20 1.42295; HCl salt, m.
 173-4°; picrate, dark yellow, m. 115-6°.

IT 857809-53-1P, Isobutyric acid, β,β' -bis(p-aminophenyl)-, di-HCl
 (preparation of)

RN 857809-53-1 HCPLUS

CN Isobutyric acid, β,β' -bis(p-aminophenyl)-, di-HCl (3CI) (CA INDEX NAME)



● 2 HCl

CC 10 (Organic Chemistry)

IT 628-49-9P, Urea, isoamyl- 3016-28-2P, Isocaproamide 4128-37-4P,
 Urea, s-diisopropyl- 4473-06-7P, Malonic acid, ethylisobutyl-
 6913-90-2P, Hydrazine, benzoylisobutyryl- 16314-53-7P, Biurea,
 1,6-diisopropyl- 19895-44-4P, Urea, α -isopropyl- β -phenyl-
 54009-59-5P, Hydrazine, α -isobutyryl- β -salicylal-
 75329-19-0P, Urea, s-diisoamyl- 84747-87-5P, Urea,
 α -(α -ethylisoamyl)- β -phenyl- 123647-93-8P, Malonic
 acid, ethylisobutyl-, diethyl ester 130001-72-8P, Malonic acid,
 isoamylisobutyl-, diethyl ester 130482-28-9P, Isocaproamide,
 α -ethyl- 275360-47-9P, Hydrazine, s-bis(δ -methylcaproyl)-
 332065-06-2P, Urea, α -isoamyl- β -phenyl- 854887-97-1P,
 Urea, (α -isobutylisoheptyl)- 857781-97-6P, Carbamic acid,
 isoheptyl-, ethyl ester 857782-06-0P, Carbamic acid,
 α -ethylisoamyl-, ethyl ester 857792-85-9P, Isobutyric acid,
 β -(p-aminophenyl)- β' -(p-benzamidophenyl)- 857796-47-5P,
 Hydrazine, benzoyl(α -ethylisocaproyl)- 857796-59-9P,
 Hydrazine, α -benzal- β -(α -ethylisocaproyl)-
 857796-79-3P, Hydrazine, s-bis(α -isobutyl- δ -methylcaproyl)-
 857797-28-5P, Hydrazine, α -isocaproyl- β -(α -
 methylbenzal)- 857797-30-9P, Hydrazine, α -(α -isobutyl-
 δ -methylcaproyl)- β -isopropylidene- 857808-78-7P,
 Isocaproyl azide, α -ethyl- 857808-80-1P, Isocaproyl azide
 857809-53-1P, Isobutyric acid, β,β' -bis(p-
 aminophenyl)-, di-HCl 857814-77-8P, Hydrazine, α -(α -
 isobutyl- δ -methylcaproyl)- β -(α -methylbenzal)-
 857815-28-2P, Hydrazine, α -benzal- β -(δ -methylcaproyl)-
 857815-33-9P, Hydrazine, α -isocaproyl- β -salicylal-
 857815-35-1P, Hydrazine, α -isobutyl- β -(α -
 methylbenzal)- 857815-50-0P, Hydrazine, s-bis(α -
 α -ethylisocaproyl)- 857815-58-8P, Hydrazine, α -(α -
 α -ethylisocaproyl)- β -salicylal- 857815-72-6P, Hydrazine,
 acetyl(α -ethylisocaproyl)- 857816-14-9P, Hydrazine,
 α -benzal- β -isocaproyl- 857816-15-0P, Hydrazine,
 α -benzal- β -(α -isobutyl- δ -methylcaproyl)-
 857829-38-0P, Carbamic acid, (α -isobutylisoheptyl)-, ethyl ester
 857830-36-5P, Caproyl azide, δ -methyl- 858017-36-4P,
 4-Octanol, 2,7-dimethyl-, isocyanate 858844-96-9P, Urea,
 s-bis(α -isobutylisoheptyl)- 858845-31-5P, Urea,

s-bis(α -ethylisoamyl)- 859191-61-0P, 3-Hexanol, 5-methyl-,
 isocyanate 859197-00-5P, Malonic acid, isoamylisobutyl-
 860580-39-8P, Acetyl azide, (β -isopropylcarbamido)-
 860580-41-2P, Acetyl azide, (β -isoamylcarbamido)- 876489-37-1P,
 3,5-Pyrazoledione, 4,4-bis(p-benzalaminobenzyl)- 897376-27-1P, Urea,
 s-diisohexyl-
 (preparation of)

L26 ANSWER 35 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1930:30241 HCAPLUS

DOCUMENT NUMBER: 24:30241

ORIGINAL REFERENCE NO.: 24:3216i,3217a-b

TITLE: Transformation of alkylated malonic acids into
 α -amino acids. VIII. Synthesis of
 p-nitrophenylalanine from p-
 nitrobenzylmalonylazidic acid

AUTHOR(S): Muhlhausser, Willi

SOURCE: Journal fuer Praktische Chemie (Leipzig) (1930), 125,

CODEN: JPCEAO; ISSN: 0021-8383

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

ED Entered STN: 16 Dec 2001

GI For diagram(s), see printed CA Issue.

AB Details are given for the preparation of p-O₂NC₆H₄CH₂CH(CO₂Et)CO₂Et in 60% yield. The K salt of p-O₂NC₆H₄CH₂CH(CO₂Et)CO₂H, very hygroscopic (81% yield), and N₂H₄.H₂O give the K salt, m. 190° (decomposition), of p-nitrobenzylmalonylhydrosidic acid, m. 137°; HCl salt, slightly hygroscopic, m. 171°; benzal compound, m. 149° (decomposition); acetone compound, m. 142° (decomposition); acetophenone compound, yellow, m. 154° (decomposition). The azidic acid is very stable in Et₂O; the fine needles explode on heating; with PhNH₂ there results the anilidic acid, m. 149°. Heating the azidic acid in Et₂O gives the polymeric p-nitrophenylalanine anhydride, which, heated with HCl at 130° for 4 hrs., gives p-O₂NC₆H₄CH₂CH(NH₂CO₂H). (p-O₂NC₆H₄CH₂)₂C(CO₂Et)₂ and N₃H₄ (more slowly with N₂H₄ H₂O) give the cyclic sec. p, p-diaminodibenzylmalonyl hydrazide, (H₂NC₆H₄CH₂)₂C.CO.NH.NH.CO, m. 288° (decomposition); di-HCl salt, m. about 300° (decomposition); dibenzal compound, m. 271° (decomposition); hydrolysis with concentrated HCl gives p,p-diaminodibenzylacetic acid-di-HCl, m. 251° (decomposition); mono-Bz derivative, m. 250°.

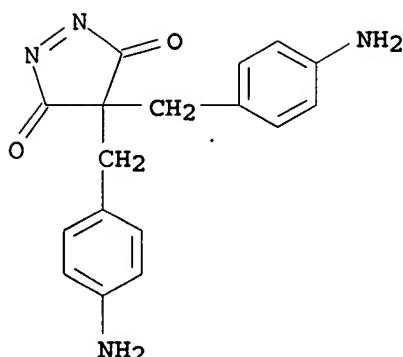
IT 856061-28-4P, 3,5-Pyrazoledione, 4,4-bis(p-aminobenzyl)-,

di-HCl 856061-29-5P, 3,5-Pyrazoledione, 4,4-bis(p-aminobenzyl)-

(preparation of)

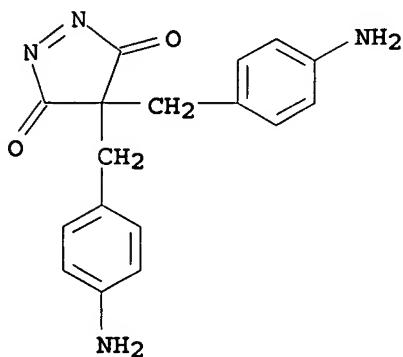
RN 856061-28-4 HCAPLUS

CN 3,5-Pyrazoledione, 4,4-bis(p-aminobenzyl)-, di-HCl (3CI) (CA INDEX NAME)



●2 HCl

RN 856061-29-5 HCPLUS
 CN 3,5-Pyrazoledione, 4,4-bis(p-aminobenzyl)- (3CI) (CA INDEX NAME)



CC 10 (Organic Chemistry)
 IT 949-99-5P, Alanine, β-(p-nitrophenyl)- 856061-28-4P,
 3,5-Pyrazoledione, 4,4-bis(p-aminobenzyl)-, di-HCl
 856061-29-5P, 3,5-Pyrazoledione, 4,4-bis(p-aminobenzyl)-
 859197-81-2P, Malonanilic acid, α-p-nitrobenzyl- 876481-81-1P,
 Malonazidic acid (N3COCH₂CO₂H), p-nitrobenzyl- 876489-37-1P,
 3,5-Pyrazoledione, 4,4-bis(p-benzalaminobenzyl)-
 (preparation of)

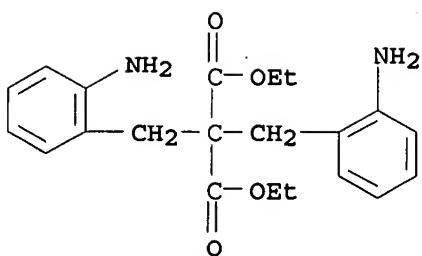
L26 ANSWER 36 OF 37 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1914:19706 HCPLUS
 DOCUMENT NUMBER: 8:19706
 ORIGINAL REFERENCE NO.: 8:2874e-i,2875a-g
 TITLE: Spiranes. VI. Some properties of the spirane carbon atom
 AUTHOR(S): Radulescu, Dan
 SOURCE: Bull. soc. Stiinte Bucaresti (1914), 21,
 32-58
 From: Chem. Zentr., 1912, II, 1363-6
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable

ED Entered STN: 16 Dec 2001
 GI For diagram(s), see printed CA Issue.
 AB R. discusses the influence of the spirane C atomic on the stability and conditions of formation of the 2 rings which it joins. No steric hindrance exists in quaternary spiranes to influence either way the closing of the rings; on the other hand, spiranes with 5 or 6 ats. in the ring are more stable than analogous compds. with open chains. The mobility of the radicals in tertiary and quaternary systems is not conditioned by steric hindrance. A study of cyclopropanecyclopentane-2,5-dione-1,1-spirane-3,4-dicarboxylic acid and its derivs. shows that the stability of the trimethylene ring is not essentially lessened by the spirane C atomic. The chromophoric properties of the rings are peculiarly affected by the quaternary systems of the spiranes, for the 2 spirane bonds in 1 ring act like a double bond on the chromophoric properties of the other ring. The group (II) is a stronger chromophore than group (I). Anhydro derivatives of type (V) containing the complex (III) give yellow solns., which become blue with an excess of strong alkali, due to addition of a CO group. With concentrate NH₄OH they give blue solns. which become red upon dilution or evaporation, reforming the unchanged starting material. The red solution of carminic acid in an excess of aqueous NH₄OH gives an indigo-blue color with very concentrate strong bases, which soon disappears. The absorption spectrum of the solution is almost identical with that of compound (V). Fecht's indane-1,3-dioneindane-2,2-spirane (IV), from o-xylene, bromine, indane-1,3-dione and NaOEt (cf. C. A., 2,75) is impure, and gives anhydروبis-1,3-dioneindane-2,2-spirane (V), pale yellow flakes, m. 256-7°, by repeated solution in C₆H₆ and precipitation with petroleum ether. This compound gives with PbHNH₂ the brownish red hydrazone of Fecht's spirane. A very dilute alc. solution gives an intense indigo color with a drop of concentrate KOH. The pure indane-1,3-dioneindane-2,2-spirane (IV), golden-yellow thick prisms, m. 149°, gives a violet color with concentrate H₂SO₄, but no color with KOH. The ethereal mother liquor from the preparation of (IV) still contains indane-1,3-dione-1-ethoxy-2,2-spirane (VI), which forms yellow prisms, m. 199-200°. It is not colored by alks., but gives a red color with concentrate H₂SO₄. 1-Imino-3-indanoneindane-2,2-spirane (VII), obtained in quant. yields by heating indane-1,3-dioneindane-2,2-spirane with an excess of alc. NH₃ in a sealed tube at 110° for 6 hrs. forms brick-red flakes. Cyclopropanecyclopentanedione-1,1-spirane-3,4-dicarboxylic acid (VIII), from Et cyclopropane-1,1-dicarboxylate, Et succinate and NaNH₂, loses 2CO₂ on being heated above its m. p., giving the compound (IX). It is converted into the anhydride (X), small white needles, at 180-200°, or by heating with Ac₂O. The anhydride reacts with b. H₂O to give the cis-form of the acid (VIII). Bisdihydroxyquinoline-3,3-spirane (bisdihydrocarbostyrylspirane) (XI), from the reduction of Et di-o-nitrobenzylmalonate, sublimes above 360° (decompose) in colorless, shining flakes. It gives a labile aminohydrobromide when HBr is passed into a suspension in AcOH. The mother liquors from the reduction give the red ansino ester (XII) upon treatment with NH₂. At 150° it is converted into (XI). Ethyl di-p-nitrobenzylmalonate, white needles, m 171°, is formed from (PhCH₂)₂C(CO₂Et)₂ by the action of fuming HNO₃ in AcOH.

IT 861591-41-5P, Malonic acid, bis(o-aminobenzyl)-, diethyl ester (preparation of)

RN 861591-41-5 HCPLUS

CN Malonic acid, bis(o-aminobenzyl)-, diethyl ester (1CI) (CA INDEX NAME)



CC 10 (Organic Chemistry)

IT 5732-35-4P, 3,3'-(4,4')-Spirobiscarbostyryl. 7142-69-0P, Malonic acid, bis(p-nitrobenzyl)-, diethyl ester 859961-19-6P,
2,2'-Spirobiindan-1,3-dione, 1'-ethoxy- 860756-38-3P,
2,2'-Spirobiindan-1-one, 3-imino- 861591-41-5P, Malonic acid, bis(o-aminobenzyl)-, diethyl ester
(preparation of)

L26 ANSWER 37 OF 37 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1914:4414 HCAPLUS

DOCUMENT NUMBER: 8:4414

ORIGINAL REFERENCE NO.: 8:660g-i

TITLE: Condensation products of nitrated benzyl chlorides with acetylacetone, methyl-acetylacetone and cyanoacetic esters

AUTHOR(S): Mech, H.

SOURCE: Compt. rend. (1914), 157, 941-3

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

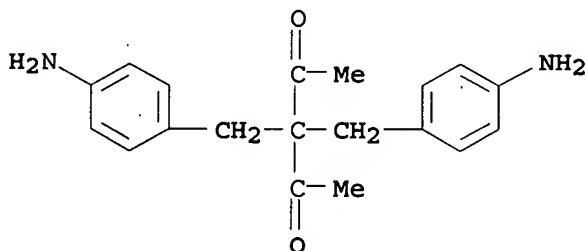
ED Entered STN: 16 Dec 2001

AB cf. Compl. rend., 143, 751; C. A., 21, 2688. On reduction, (p-O2NH4CH2)CAC2 readily formed the di-p-amino derivative, powder, m. 126°, chloroplatinate, reddish brown powder. When p-O2NC4H4CH2Cl acts upon Ac2CHMe, AcOH and methyl-p-nitrophenylbutanone, AcCHMe.CH2C6H4NO2 powder, m. 54°, were obtained. Its oxime, prisms, m. 121°; semicarbazone, yellow microcrystals, m. 199°. By the usual condensation with O2NC6H4CH2Cl and NCCH2CO2Me M. prepared methyl di-o-nitrobenzylcyanoacetate, microcrystals, m. 103°, and the p-isomer, powder, m. 161°.

IT 859949-96-5P, 2,4-Pentanedione, 3,3-bis(p-aminobenzyl)-
(preparation of)

RN 859949-96-5 HCAPLUS

CN 2,4-Pentanedione, 3,3-bis(p-aminobenzyl)- (1CI) (CA INDEX NAME)



CC 10 (Organic Chemistry)

IT 56751-40-7P, Isobutyric acid, α -cyano- β , β' -bis[p-nitrophenyl]-, methyl ester 470448-77-2P, Isobutyric acid, α -cyano- β , β' -bis[o-nitrophenyl]-, methyl ester
859949-96-5P, 2,4-Pentanedione, 3,3-bis(p-aminobenzyl)-
(preparation of)

=> d his nofile

(FILE 'HOME' ENTERED AT 08:00:59 ON 04 JUN 2007)

FILE 'HCAPLUS' ENTERED AT 08:01:18 ON 04 JUN 2007

L1 1 SEA ABB=ON PLU=ON US20050288480/PN
SEL RN

FILE 'REGISTRY' ENTERED AT 08:01:34 ON 04 JUN 2007

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L3 STR

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L5 STR L3

L6 0 SEA SSS SAM L5

L7 SCR 1098

L8 0 SEA SSS SAM L5 AND L7

L9 SCR 1569

L10 0 SEA SSS SAM L5 AND L7 AND L9

L11 0 SEA SSS SAM L5 AND L9

L12 0 SEA SSS SAM L5

L13 STR

L14 0 SEA SSS SAM L13

L15 STR L13

L16 0 SEA SSS SAM L15

D QUE STAT

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SAV L17 LIS523/A

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L21 16 SEA ABB=ON PLU=ON L19 AND (POLYMER? OR PLASTIC?)/SC,SX

L22 3 SEA ABB=ON PLU=ON L19 AND PHOTO?

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L24 16 SEA ABB=ON PLU=ON L19 AND RACT/RL

L25 40 SEA ABB=ON PLU=ON (L21 OR L22 OR L23 OR L24)

L26 37 SEA ABB=ON PLU=ON L25 AND (1840-2003)/PRY,AY,PY